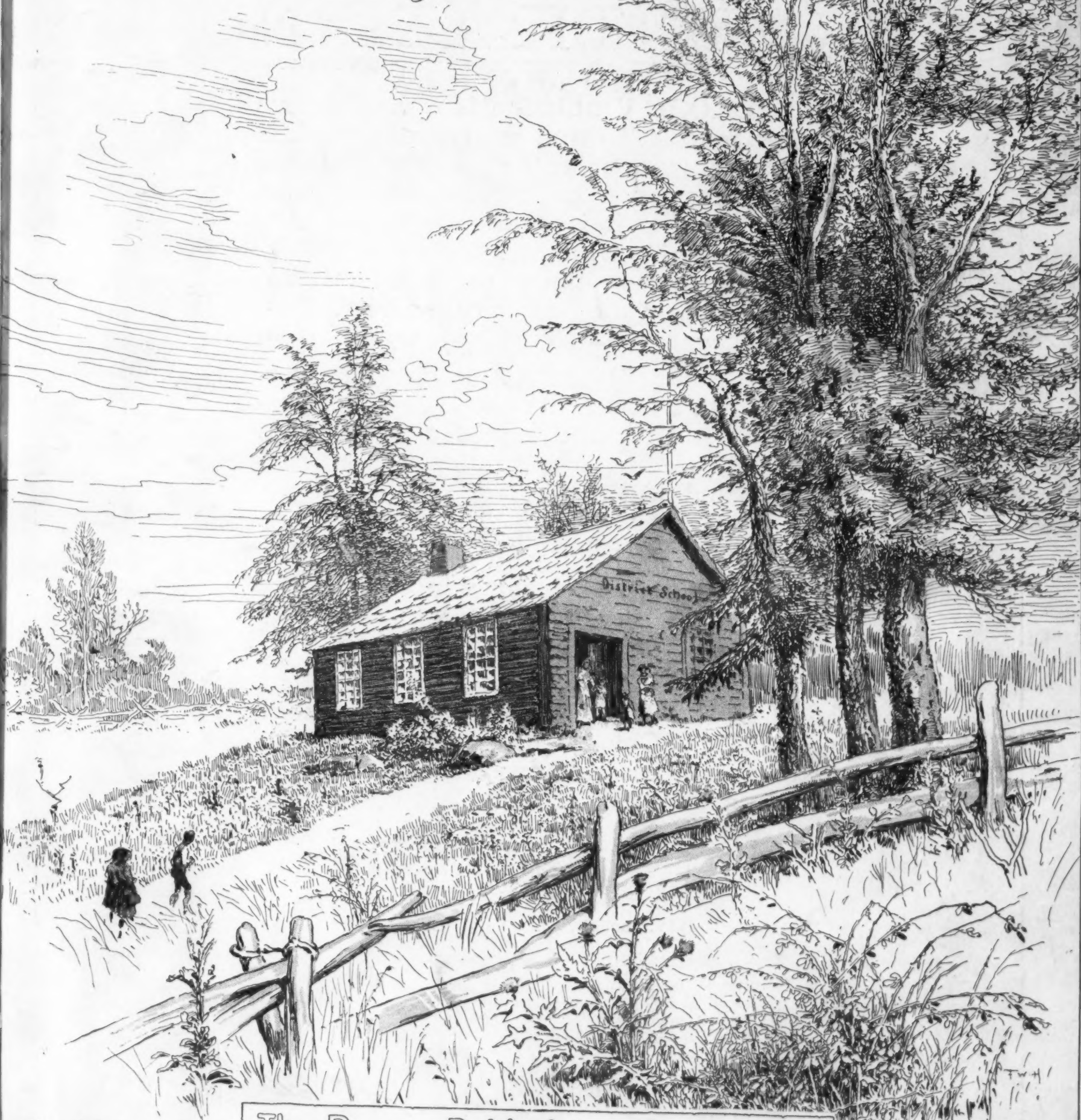


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THE AMERICAN School Board Journal

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JULY 1914

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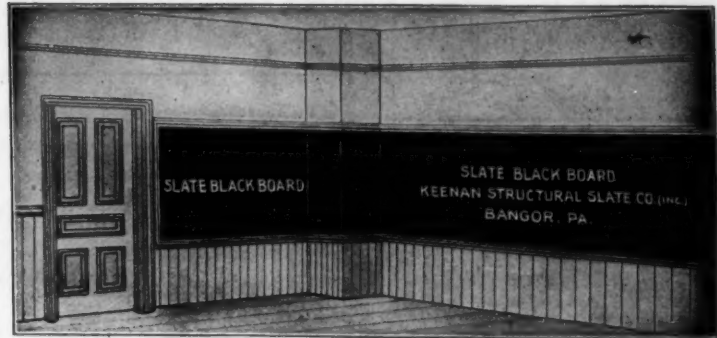
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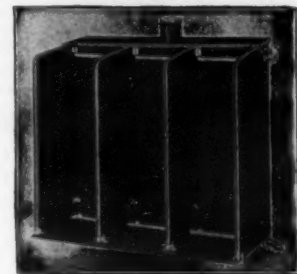
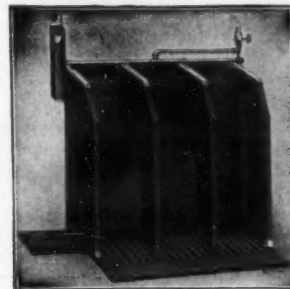


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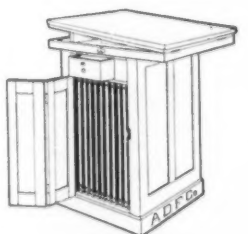
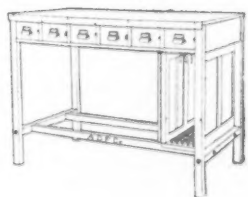
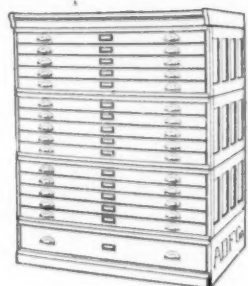


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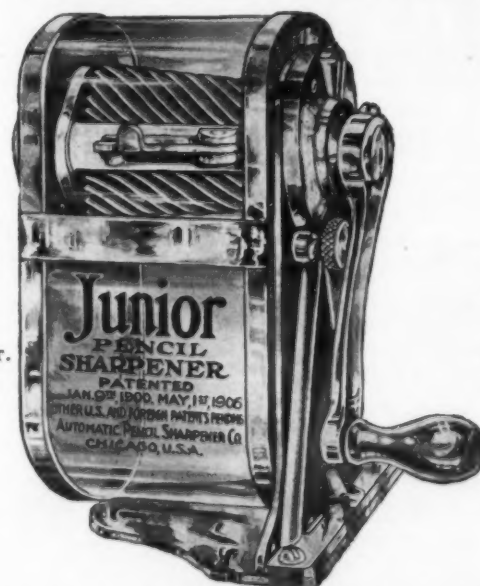
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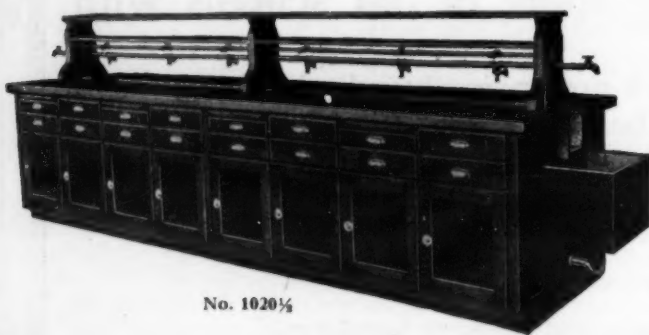
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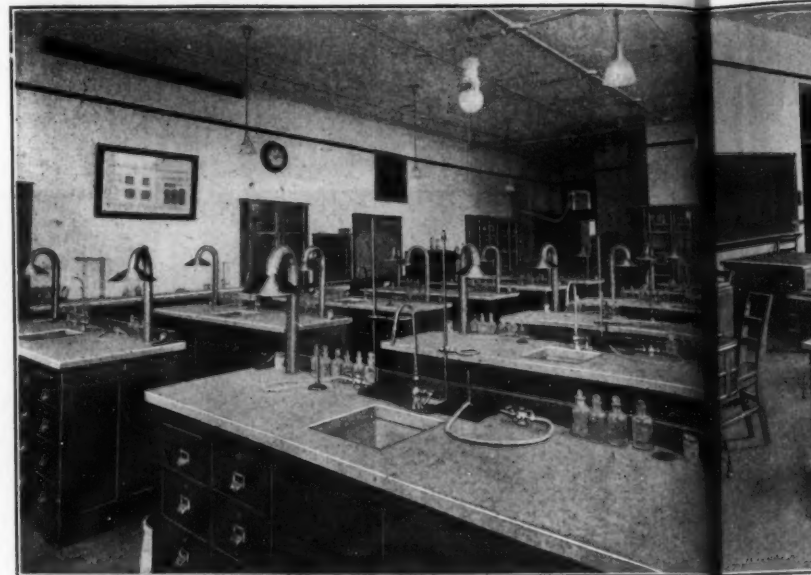
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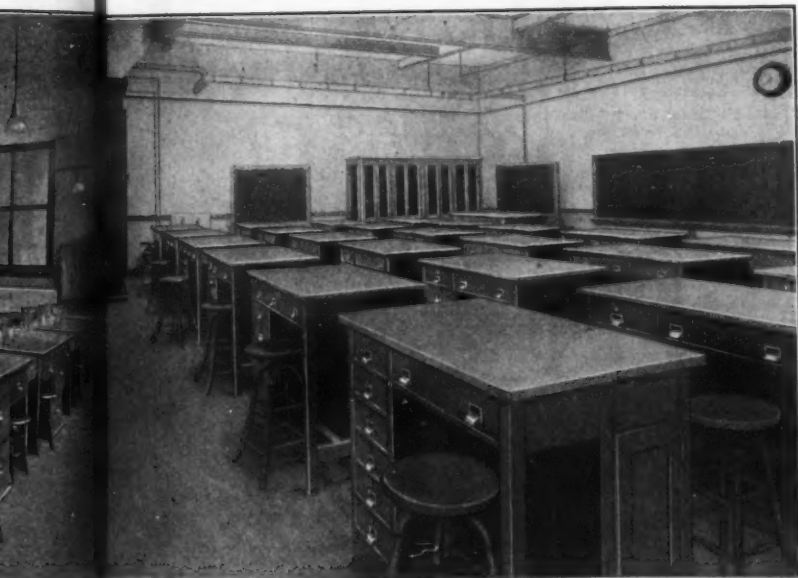
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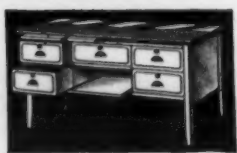
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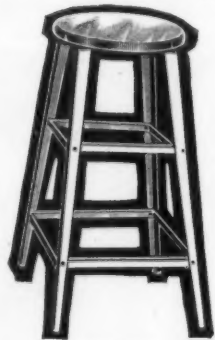
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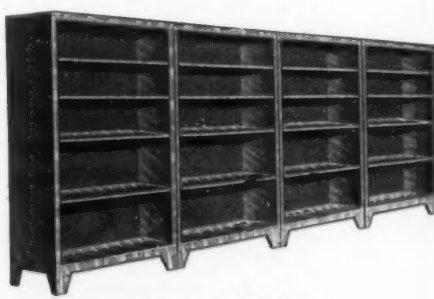
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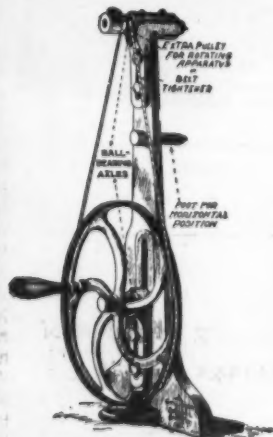
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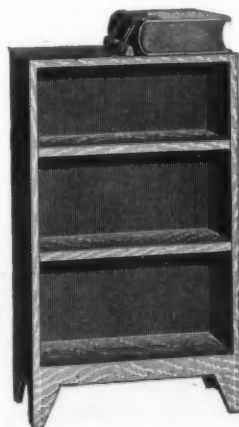
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TABLE OF CONTENTS

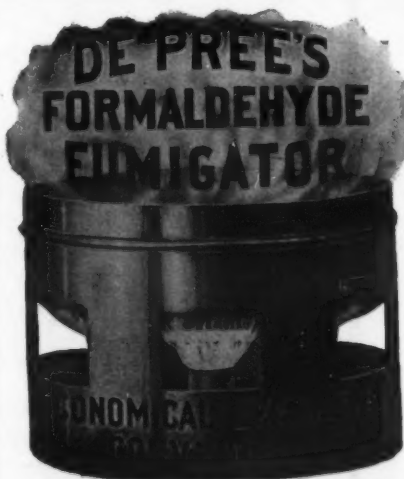
	Page
Cartoon—A Summer School Problem.....	9
Overhead Costs, Wm. T. Keough.....	10
Some School Affairs, Henry R. M. Cook.....	11
The Selection of Equipment for Physics and Chemistry Laboratories, A. C. Norris.....	14
Standard Units of School Measurement, Geo. W. Gerwig.....	16
Visual Instruction and Its Management, A. W. Abrams.....	17
Concentration of Business Functions in Public School Administration, Wm. Dick.....	19
Dr. Wm. Rullkoetter: Teacher, S. J. Vaughn.....	20
The Memphis Convention, Melvin E. Rice.....	21
The Value of Conventions, Paul Kreuzpointner.....	21
Editorial.....	28
An Important Court Decision.....	30
Fire and Schoolhouses, C. G. Persons.....	32
Directed Study and the Recitation, A. S. Martin.....	34
Portland School Gardens, M. O. Evans, Jr.....	36
The Equipment of Commercial Departments.....	38
Efficiency in the Schoolroom, F. E. Cooper.....	41
School Board News.....	46
For Busy Superintendents.....	48
Personal News of Superintendents.....	50
School Rules.....	51
Summer Schools.....	53
Teachers' Salaries.....	54
School Administration.....	56
Out of the Day's Work.....	58
School Law.....	59
School Board Notes.....	64
Building and Finance.....	66
School Trade News.....	68
New Books.....	72
Schoolroom Humor.....	84

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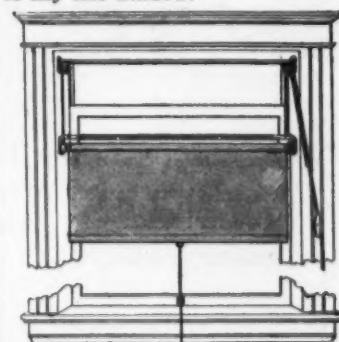
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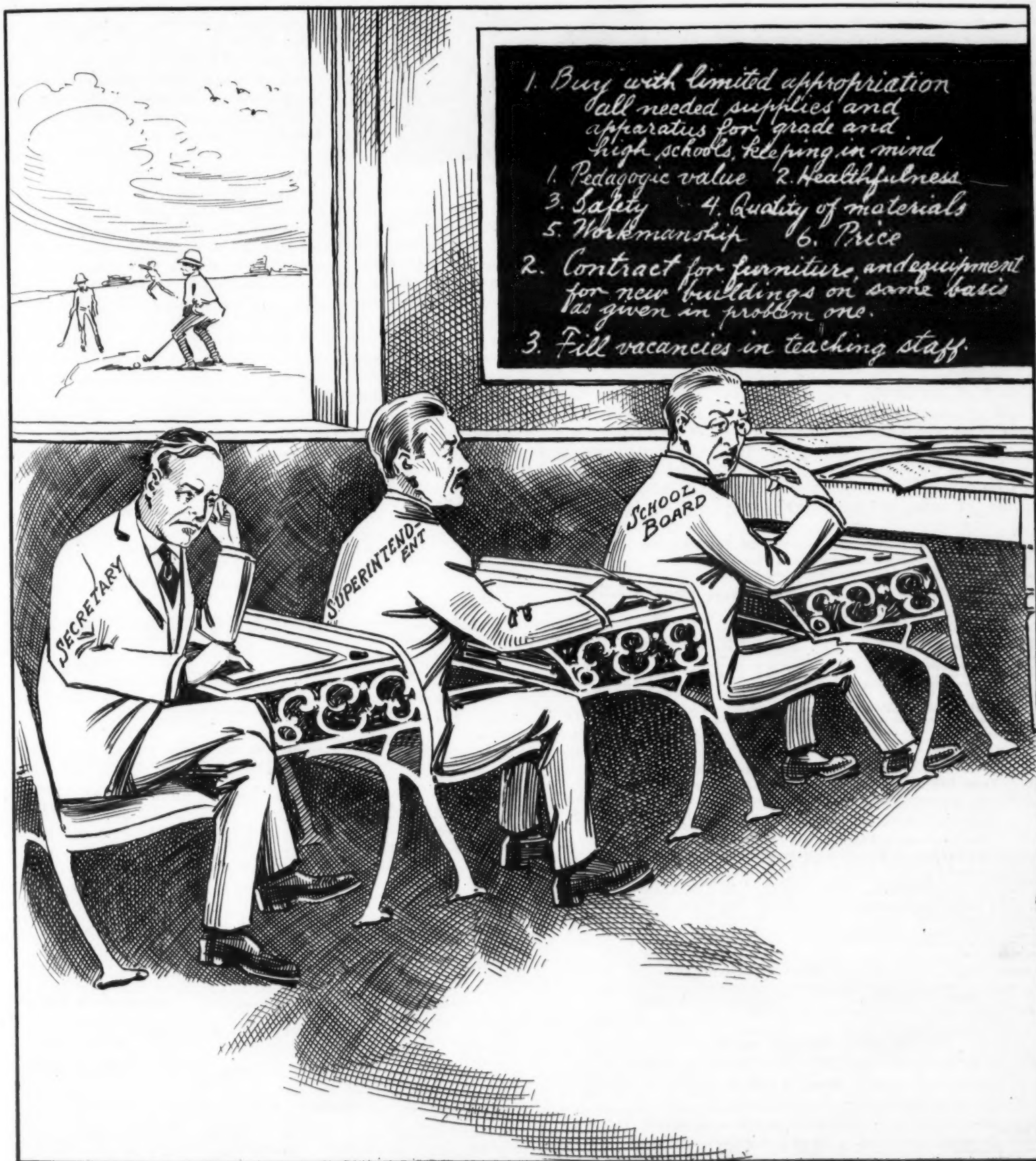
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A SUMMER "SCHOOL PROBLEM" FOR THE SCHOOL OFFICERS.

V.W.T.

OVERHEAD COSTS

William T. Keough, Business Agent Boston School Committee, Boston, Mass.

One of the most important expenses in any activity is that of overhead costs. This holds true whether the object of the activity is the creation or conservation of wealth or the management of public business, charitable, philanthropic, or eleemosynary institutions.

In commercial lines of endeavor, where competition is keen, the size of this burden must be kept within close bounds. If by the increase of administrative or supervisory officials, the efficiency of the organization is improved, the profits increase. If such improvement does not result, the increase of overhead charges must operate to decrease the profits. When the process is carried to the point where dividends can no longer be paid, the organization ceases to have any further reason for existence and, unless economies are effected, dies naturally.

Where growth of overhead costs has no such natural check, there is always danger of the system becoming top-heavy with administrative and supervisory officials. In addition to the salaries of these officials, there are the further burdens of the salaries of the clerks which they invariably require, rent or cost of office quarters, and the increased complexity of system which inevitably attends all such increases.

It is easy for an enthusiastic advocate to argue that the appointment of an additional official is going to improve the efficiency of the entire system to such an extent that the additional cost of such a new department will be returned many times in the increased quantity or improved quality of the output. And in educational systems, where there has hitherto been little or no real success in measuring results, it has been exceedingly difficult to meet such arguments.

Until some system of measurement of quality and quantity of output attains general recog-



HON. WM. T. KEOUGH,
Boston, Mass.

nition, it appears that the principal check on any abnormal growth of this burden will be in the exposition of the costs of overhead charges and in their comparison with other years in the same city and with similar costs in other cities.

In attempting to compare these costs for the several cities, I have experienced great difficulty in getting from the public reports the data necessary to make a direct and fair comparison. It was, therefore, with the hope that a discussion of the matter might have some influence in securing the presentation of such costs in greater detail that I have undertaken to place this matter before you.

I have compared the growth of the costs of

administration and professional control in the city I represent with the growth of the total expenditures and school population for a period of five years and for a period of two years. The results are shown on Table 1 and Table 2.

Looking first at the five-year period, it is interesting to note that while the average membership in all day schools of Boston increased 7.6 per cent, the average attendance in all day schools 8.4 per cent, and the average attendance in evening schools 20.1 per cent, the increase in the costs of the several administrative offices ranged from 26.4 to 62.8 per cent, the total increase in the cost of administration being 43 per cent.

During this same period the seven departments of professional control existing throughout the period show increases of from 20.4 per cent to 255.2 per cent, while the several forms of professional control added during the period bring the increase in the total cost of professional control up to 62.6 per cent.

During this period the increase in total expenditures was 37.7 per cent.

Looking now at the two-year period, you will note that while the average membership of day schools increased 5.1 per cent, the average attendance of all day schools increased 5.3 per cent, and the average attendance of evening schools 17.3 per cent, the increases in the cost of the several administrative offices ranged from 17.8 to 27.7 per cent. The decrease in two of the offices brought down the total increase to 12.5 per cent. If it had not been for the decrease in these two offices, the total increase would have been 14.7 per cent.

During this latter period the several departments of professional control existing throughout the period show increases of from 6.2 to 104 per

(Concluded on Page 82)

TABLE SHOWING COST OF ADMINISTRATION FOR THE YEARS 1908-09 AND 1913-14, AND THE INCREASES IN FIVE YEARS.

	1908-09.	1913-14.	Increases in Five Years.	Increases in Five Years, Per Cent.
Secretary.....	\$8,124 73	\$12,359 15	\$4,234 42	52.1
Business Agent *.....	†24,112 92	34,006 75	9,893 83	41.
Schoolhouse Custodian.....	3,011 74	3,973 69	961 95	31.9
Superintendent.....	13,240 83	21,549 58	8,308 75	62.8
Assistant Superintendents.....	28,812 84	36,412 40	7,599 56	26.4
Administration Account.....	13,454 54	21,460 00	8,005 46	59.5
Totals.....	\$90,757 30	\$129,761 57	\$39,004 27	43.

* Duties of Auditor transferred to Business Agent October 14, 1912. † Including Auditor.

TABLE SHOWING COSTS OF SUPERVISION OR PROFESSIONAL CONTROL FOR THE YEARS 1908-09 AND 1913-14, AND THE INCREASES IN FIVE YEARS.

	1908-09.	1913-14.	Increases in Five Years.	Increases in Five Years, Per Cent.
Department of Manual Arts.....	\$13,510 37	\$21,496 05	\$7,985 68	59.1
Department of Music.....	19,331 20	23,382 14	4,050 94	21.
Department of School Hygiene.....	16,878 34	20,595 05	3,716 71	22.
Director of Practice and Training.....	*3,192 79	11,341 06	8,148 27	255.2
Director of Kindergartens.....	†3,050 46	6,979 11	3,928 65	128.8
Department of Evening and Continuation Schools, Director of Kindergartens.....	1,807 81	2,177 41	369 60	20.4
Supervisor of Household Science and Arts.....	1,486 51	2,125 01	638 50	43.
Supervisor of Special Classes.....	1,858 33	1,858 33	.....	.....
Vocational Information.....	827 19	827 19	.....	.....
Director of Courses in Practice in Salesmanship.....	250 00	250 00	.....	.....
Improving Course in Arithmetic.....	2,828 75	2,828 75	.....	.....
Speech Improvement.....	2,491 56	2,491 56	.....	.....
Totals.....	\$59,257 48	\$96,353 66	\$37,096 18	62.6

* Supervisor of Substitutes. † Department of Evening Schools.

STATISTICS, 1908-09 AND 1913-14.

	1908-09.	1913-14.	Increase in Five Years.	Increase in Five Years, Per Cent.
Total expenditures *.....	\$3,621,304 48	\$4,986,505 25	\$1,365,200 77	37.7
Day Schools:				
Average membership.....	96,025	104,309	7,384	7.6
Average attendance.....	88,475	95,898	7,423	8.4
Evening Schools:				
Average attendance.....	7,778	9,344	1,566	20.1
Playgrounds:				
Average attendance.....	†12,264	14,033	1,769	14.4

* Exclusive of new buildings, repairs, alterations, rents and extended use of the public schools. † Average attendance (9,000) for park playgrounds estimated.

TABLE I.

TABLE SHOWING COST OF ADMINISTRATION FOR THE YEARS 1911-12, 1912-13 AND 1913-14, AND THE INCREASES IN TWO YEARS.

	1911-12.	1912-13.	1913-14.	Increases in Two Years.	Increases in Two Years, Per Cent.
Secretary.....	\$10,326 66	\$11,476 89	\$12,359 15	\$2,032 49	19.7
Business Agent *.....	†36,127 57	†34,226 00	34,006 75	†2,120 32	.....
Schoolhouse Custodian.....	4,356 93	3,628 37	3,973 69	†383 24	.....
Superintendent.....	16,880 65	15,487 03	21,549 58	4,668 93	27.7
Assistant Superintendents.....	30,900 31	32,085 71	36,412 40	5,512 09	17.8
Administration Account.....	16,725 58	19,736 41	21,460 00	4,734 42	28.3
Totals.....	\$115,317 70	\$116,640 41	\$129,761 57	\$14,443 87	12.5

* Duties of Auditor transferred to Business Agent October 14, 1912. † Including Auditor. ‡ Decrease.

TABLE SHOWING COST OF SUPERVISION OR PROFESSIONAL CONTROL FOR THE YEARS 1911-12, 1912-13 AND 1913-14, AND THE INCREASES IN TWO YEARS.

	1911-12.	1912-13.	1913-14.	Increases in Two Years.	Increases in Two Years, Per Cent.
Department of Manual Arts.....	\$15,422 03	\$18,393 53	\$21,496 05	\$6,076 02	39.4
Department of Music.....	19,802 72	24,490 17	23,382 14	3,579 42	18.1
Department of School Hygiene.....	19,396 77	19,971 59	20,595 05	1,198 28	6.2
Director of Practice and Training.....	*5,556 96	8,532 45	11,341 06	5,784 10	104.
Director of Kindergartens.....	1,934 78	1,892 37	2,177 41	242 63	12.5
Supervisor of Household Science and Arts.....	2,269 72	2,672 78	2,125 01	†144 71	.....
Supervisor of Special Classes.....	1,067 56	1,858 33	1,858 33	.....	.....
Department of Evening and Continuation Schools.....	4,971 19	†6,649 29	6,979 11	2,007 92	40.4
Director of Courses in Practice in Salesmanship.....	.....	250 00	250 00	.....	.....
Improving Course in Arithmetic.....	1,361 51	2,828 75	2,828 75	.....	.....
Speech Improvement.....	1,621 26	2,491 56	2,491 56	.....	.....
Vocational Information.....	1,986 05	2,179 13	827 19	†1,158 86	.....
Totals.....	\$71,340 22	\$88,831 64	\$96,353 66	\$25,013 44	35.1

* Supervisor of Substitutes. † Excluding Extended Use of the Public Schools. ‡ Decreases.

STATISTICS, 1911-12, 1912-13 AND 1913-14.

	1911-12.	1912-13.	1913-14.	Increase in Two Years.	Increase in Two Years, Per Cent.
Total expenditures *.....	\$4,277,938 30	\$4,708,000 00	\$4,986,505 25	\$708,566 95	16.6
Day Schools:					
Average membership.....	99,272	97,118	104,309	5,037	5.1
Average attendance.....	91,049	93,774	95,898	4,849	5.3
Summer High School:					
Average attendance.....	209	197	.....	.....	.....
Evening Schools:					
Average attendance.....	7,964	8,509	9,344	1,380	17.3
Evening School Extension:					
Average attendance.....	716	1,077	.....	.....	.....
Playgrounds:					
Average attendance.....	7,391	12,205	14,033	6,642	89.9

* Exclusive of new buildings, repairs, alterations, rents and extended use of the public schools.

TABLE II.



SOME SCHOOL AFFAIRS

Henry R. M. Cook, Auditor, Board of Education,
New York, N. Y.

President's Address, Third Annual Convention of the
School Board Accounting Officers Association,
Memphis, Tenn.



School accounting in its broad aspect covers, in a secondary degree, just as much ground as does the fundamental object of every school system—which is education.

Education first sweeps over the social arena and then accounting follows along to record the facts and make history, while statistics may be constructed from the accounting which will reflect the quality of the educational results and possibly indicate their deficiencies. School accounting, therefore, is capable of producing facts quite different from those which the merchant expects from his books. School accounting trends along the business side of social service, in contradistinction to commercialism.

But school accounting and the accounting of the business world have some things in common. Economical administration in the conducting of the affairs of great corporations and business enterprises is reflected in the affairs of school systems, and the principles involved and methods employed are not dissimilar. The object desired is the same in both cases—greater efficiency.

The mere mention of the word "efficiency" is sometimes greeted with incredulous smiles now-a-days, owing to its adoption by charlatans in order to dispose of their wares, and patent medicine cures, but fear not, cease your alarm, because whatever I may suggest along such lines will be conservative.

Educational waste is not necessarily monetary waste in a primary sense. Any condition which wastes the time of the pupil is more deleterious than monetary waste, for time cannot be replaced. An inefficient teacher can occasion much waste of time.

However, it may not be the teacher's fault notwithstanding the fact that his or her inefficiency is working harm. The fault may be with the educational authorities. Thanks to the creation of standards of efficiency incidental to entrance into and promotions thereafter in most school systems, efficiency in this respect is maintained for a long while during the life of the teacher, at any rate, as long as promotion and increased emolument is possible. However, there are two other factors which enter into the problem,—temporary disability occasioned by sickness, and permanent disability due to age and decline of the faculties.

The Pensioning of Teachers.

I have thus led up to my main point which is the matter of pensioning of employes, and my secondary point which deals with the absence of teachers.

I believe in the principle of pensioning teachers:

First. Because faithful service representing the individual effort of the greater part of a lifetime devoted to the highest kind of social work should receive adequate and substantial consideration.

Second. Because preparation for the teaching profession is of itself expensive both in time and money and the average emoluments of the profession are small. Has it ever occurred

to you that the total earnings of one of the rank and file in a school life of thirty years in most cities of even fair size does not amount to more than \$30,000 or \$35,000 and there are many elsewhere who are not even so fortunate? The same amount of brains and education applied in other pursuits or in other professions would undoubtedly produce much greater returns.

Third. The decline in mentality and educational forcefulness which may, and frequently does, occur after a long period of service is reflected in the quality of the work of the teacher, and thus the pupil may not receive the full educational benefits to which it is entitled. This in my estimation is more important than any monetary loss.

The legitimacy of the principle of pensioning teachers seems to have become fairly well established, but its practice is not universal, and many communities are still holding back, while recognizing the merits of the case.

New York City has had a pension fund for teachers for twenty years, but it is not in a satisfactory condition, owing to its faulty construction and composition. The constitution of the State of New York like that of many other states, prohibits the gift of public moneys: When the necessity for and the desirability of the pensioning of teachers and others became obvious, the constitutional difficulty had to be met. Circumlocution—that wonderful aid to law—was employed effectively, and the legislature was prevailed upon for humanitarian reasons, to pass a law which was obviously unscientific in its method of creating a pension fund. It has served its purpose for many years, allayed the fear of constitutional difficulties which prevailed at the time of its passage, and strange to say, has been taken at its face value as a model for legislation in some other states. As one of those who assisted in the original effort to secure the passage of a pension law, I may say that I am personally familiar with the conditions, which prevailed at the time of this hybrid piece of legislation.

The New York Teachers' Pension Fund.

The Public School Teachers' Retirement Fund is composed of the following elements:

1. Deductions from teachers' salaries for absence.
2. One per cent deducted monthly from the gross salary of the teacher (not exceeding \$30 per annum).
3. Five per cent of the Excise Moneys apportioned to the City of New York.
4. Gifts, donations, fines, etc., etc.

You will observe at once that the foregoing will produce a variable income. The offsets are the annuities paid, and the refunds for absences excused. These items are also variables because the annuitants' payroll decreases by deaths of those retired and increases by the addition of persons who are retired from time to time. The last mentioned may be kept within bounds by refraining from retiring those eligible, but by so doing, one would, of course, de-

feat, or at least restrict, the operation of the retirement principle.

New York City has recently faced this situation, and legislative relief was attempted in the sense that a certain amount of capitalized surplus (the result of savings in the early days when retirements were not so prolific) was sought to be released and to be made available for current use. This relief was, of course, only temporary and did not remedy the inherent defects of the retirement law. It was merely a life-preserver thrown to the struggling swimmer as an aid to ultimately reaching a place of safety. Notwithstanding the fact that the legislature passed the measure; that the board of education had initiated the bill; that the Mayor of the City of New York had approved the same—the Governor vetoed the act and retirement matters are, therefore, in *statu quo*. However, the practical effects of an insufficient fund are:

1. A tendency to restrict retirements, where retirements are undoubtedly necessary.
2. A tendency to mulct the sick teacher of the present in order to care for the annuitant of the future.
3. A tendency to mentally exaggerate the volume of teachers' absences, without regard to its antithesis, viz,—volume of service rendered.

I have always been of the opinion that if the pension principle is legitimate, and I firmly believe that it is, the retirement of any person should represent the ultimate reward for good and faithful service, rather than mere charity accorded as the result of superannuation. In other words, I have always regarded retirement from the service on a high plane.

The Earning Powers of Teachers.

If the pensioning of teachers is proper, and, as I have stated before, I emphatically believe that it is, their retirement should not be dependent upon financial limitations. I mean by this, that it is neither proper nor economical for a person to be retained on full pay in the school system, if they are no longer capable of rendering full and efficient service.

Another view of the case is that after a given number of years of service, and after having entered upon the autumn of life a teacher should be morally entitled to some few years of rest from her labors, her *otium cum dignitate*, so to speak. The reason for this view is found in the fact that very few of those teachers who arrive at mature age have been able to lay by from their modest earnings during their school life a sufficient sum for their wants in after life. It is not in the nature of ordinary human events that the life of the average school teacher can be so regulated and standardized that none of the common ills will reach her. Her own immediate affairs she can regulate, but how about the hundred-and-one things which may happen in her home relations, and the teacher is more often than not the principal breadwinner. I do not state this to awaken undue sympathy, but solely as a

reason why the average teacher cannot save any considerable sum for the exigencies of old age and superannuation.

Every school board has a fund for the purpose of payment of the salaries of teachers on the active list. The fact that there is an *active* list gives rise to the suggestion that there should be an *inactive* list representing those persons who have retired from practical work.

There are precedents in this country for this view of the case, because that is the way that the personnel of the Army and Navy is regarded. I may say that this is more the rule than the exception in foreign countries. So there is nothing new and novel about this suggestion.

Active life in any capacity calls for a greater expense or standard of expenditure, than in the case where one has retired from the turmoil to seek seclusion and rest. However, we are all accustomed to living according to standards correlative with our earnings and rank and this suggests that any pension scheme should possess a direct relation to such facts. I am, therefore, of the opinion that all persons are equitably entitled to at least half pay, except in cases where such pension would be insufficient to provide reasonable maintenance, when the amount should be raised to a minimum.

Direct Appropriations Suggested.

I have suggested that the pension principle should not be restricted by financial limitations, therefore, I think that if a community can be trusted to pay the salaries of persons on the *active* list from a budget appropriation, it can also be trusted to pay pensions for those on the *inactive* list, and in similar manner.

I see no great safeguard in the creation of a permanent fund, principal or capital, or whatever it may be described as. Such moneys thus sequestered become merely the basis upon which to compute and collect interest. The income collected by this method of financing represents but a pitiful sum in comparison with the normal requirements of any school system in the matter of paying pensions. In New York City it would require a permanent fund of over \$30,000,000 invested at 4 per cent to pay our present payroll of teacher annuitants. Our permanent fund was originally \$800,000 and we sought to reduce it to \$500,000. Why should we seek the impractical—why not adopt simple and direct methods? A straight annual appropriation is, I believe, the ultimate solution of the pension problem.

One peculiar feature of the New York City Teachers' Retirement Fund is the mulcting of the teacher for absence and the placing of such deductions in the fund. It seems incongruous that the financial loss which an unfortunate teacher sustains by reason of his or her absence due to sickness and for which they are mulcted, should form a large part of the corpus of the retirement fund. It seems like robbing Peter to pay Paul. The two elements are not germane. I do not mean by this to suggest for one moment that teachers' absences should not be restricted, because we are all, whether teachers or other employes, paid mainly for our presence and not for our absence. I think the time has arrived when the item for retirement of teachers should form a part of the annual budget. On the other side of the books, the community should receive benefit as an offset to this expense, by being credited with all unexcused absence money, it being assumed that the rules and regulations governing absence would be fixed on a basis equitable and satisfactory to both the City and the teacher.

The following figures pertaining to this question taken from the records of the Board of Education of New York City may be interesting:

Disbursements for salaries of teachers et al entitled to participate in pensions	1911	1912	1913
Absence deductions	\$22,429,437.03	\$26,945,750.28	\$28,127,666.36
Percentage	555,992.42	575,850.37	594,927.94
Absence deductions refunded	2 27-100%	2 13-100%	2 11-100%
Percentage	299,831.99	338,093.66	245,417.66
Service efficiency	1 33-100%	1 25-100%	87-100 of 1%
	97 53-100%	97 87-100%	97 89-100%

You will note that service efficiency is quite high.

I have touched upon the question of the legality of pension funds, in their relation to New York State Constitution. It is obvious that when the excise moneys are depleted for the benefit of a retirement fund it is at the expense of the taxpayer and not the teacher. It is obvious that a teacher cannot contribute an amount representing her "absence." This is fiction pure and simple. The taxpayer contributes this money.

Constructing Funds on Actuarial Bases.

Many retirement plans call for a "percentage" of the teachers' salary to help support the retirement fund. When a salary has been fixed by legislative enactment, either directly or indirectly by the act of some body created by the legislature, which act has the effect of statute law, such salary or compensation thus fixed may not be reduced by a conflicting law subsequently enacted, and concurrently operative with the original law. You will doubtless be able to couple this principle with the Federal Income Tax Law. The United States Government has decided that it cannot make a deduction from salaries of employes in states and municipalities, etc., because of the general inhibitions contained in the constitutions of many states. In the construction of retirement funds, this point should be remembered in its relation to statutory deductions or percentages from teachers' salaries. A further legal defect in many retirement laws is the fact that all are required to contribute for the benefit of the few. This is a revival of the tontine insurance principle, pure and simple, which has been declared illegal in many states and abandoned absolutely by the insurance companies.

The construction of a teachers' pension fund on an actuarial basis will, I think, prove to be rather unsatisfactory, because of the inherent variables, comprising the component parts. It is not so much of an actuarial proposition as some people have been led to believe. It is not a proposition like the purchase of an endowment or an annuity from a life insurance company; the principle is very different. If we ever come to the point where it is necessary to get down to an actuarial or annuity basis, it would probably be cheaper for anyone to go to a life insurance company and purchase the standard article.

There is an old adage that "simplicity is a virtue" and in my humble judgment the sooner we get down to an elementary basis in the organization of retirement funds, the better. It should not be necessary to prescribe by legislative enactments a great deal of arithmetical formulae and go thru so many abstruse operations in order to provide money to pay pensions, if we are all agreed that the retirement principle is correct.

Recently, an efficiency expert in pension matters told me that by the creation of reserves and the establishment of retirement funds on an actuarial basis, they could be placed in a state of financial equilibrium in 98 and some fractions of a year. This looked like the approach of the millenium, and I suggested that if the same principle were applied to the affairs of a City, there would be no occasion to make any appropriations after the year 2012.

At that time his statue would doubtless appear prominently in some public place in every city of the Union, and the old saying that "there is nothing surer than death and taxes" would be considered archaic, at least in one particular. My friend, the expert, at first looked startled and mournful at the prospect, for after that year there would no longer be room for members of his profession. I think a straight annual appropriation for pensions would serve all practical purposes.

Employes' Pensions.

Now that I am discussing the matter of teachers' pensions I desire to suggest to this Association as a matter for future consideration, the subject of "pensions for all employes" and, I trust that at the next convention we may receive the concrete views of our members on this important item.

The city authorities in New York are, and have been, investigating the subject of pensions, not only teachers' pensions, but also the pension funds of various departments, with the object of unifying and consolidating all of them, and creating a pension plan and law to cover all employes thruout the municipality.

This is a vast piece of work and doubtless will take two or three years to complete, but it is one of the most important steps that any municipality has taken and marks an epoch in civic history. If this great and beneficent work is accomplished satisfactorily, and there is every reason to believe that it will be, then the City of New York will have set a standard for the entire country, and the present city administration will have justified the confidence reposed in it by the people, and earned the gratitude of thousands of employes by providing the solution of a complicated and at times a vexed question.

You will observe that I have criticised the New York pension situation, and I have done this with purely constructive object. It is good for us to discuss our failures and our faults, as well as to applaud our successes. It is only by open acknowledgment of our weaknesses that we shall know our strength. The people of today will then be better able to avoid repeating or perpetuating the mistakes which have occurred in the past.

Budget Segregation.

The preparation of a budget is one of the extremely important functions of a school board. Such boards of education as possess the taxing power or power to fix the financial volume of their necessities are to be congratulated. However, those who are obliged to run the gauntlet of fixation of their needs by the City financial authorities are not so well placed.

The worst difficulty experienced in the class last mentioned lies in the segregation of the budget. It is preferable to have a meager bulk appropriation untrammelled by attempts at segregation and classification, than a larger appropriation split up into small pieces. Better educational service can be done with the bulk appropriation, and I believe that more can be accomplished within the fiscal period.

For some years past New York City has had a segregated budget in the sense that appropriations have been made to the several departments of the City, and to the board of education, under a great number of separate titles. Each of these items has the force and effect of a separate appropriation, thus limiting, under the statute, the amount of funds available for the purpose indicated by the segregated title, except that, upon application to the Board of Estimate and Apportionment, that body, if it sees fit, may transfer funds from an item which is in excess of its requirements to an item which is insufficient for its purposes (with some statu-

tory exceptions). For example, for the year 1914 the educational funds are divided into 126 separate, numbered accounts. All of the salary accounts are again subdivided into what are known as "budget schedule lines," some 307 in number, for example, "5 clerks at \$900—\$4,500.00," etc., etc. Each of these budget schedule lines also has the force and effect of a separate appropriation which the board of education may not deviate from in any degree except upon application to, and consent of twelve votes of the Board of Estimate and Apportionment. The educational funds are thus scattered among 433 items, and these items were determined and established in October of 1913 for the year 1914.

Segregated Budgets Impractical.

So far as my experience and observation goes, such segregation is a distinct handicap to smooth and efficient administration. I have had repeated practical illustrations of this in the Department of Education. I have talked with many executives in the city departments, and opinion as to the worth of segregated budgets appears to divide sharply along the line between theory and practice. The strongest advocates of segregated budgets in New York City are those who are looking at the proposition from a purely academic viewpoint, and who do not experience the enervating effects of segregated budgets upon departmental accomplishment. Executives in the departments who are daily confronted with the necessity of initiating, carrying forward, or concluding some departmental matter, find themselves, at times, almost hopelessly barred and circumscribed. For instance, a thing is to be done, requiring perhaps a building alteration, some equipment, some supplies, heat, janitorial services, the salary of a teacher, etc., etc. There may be ample funds from a bookkeeper's viewpoint for all of these needs except one. It is true, application may be made for transfers, but the result is that the doing of the things waits upon the mechanical shuffling of bookkeeping credits by a clerk or bookkeeper. Important propositions in this department are at this moment in an inert condition, because a bookkeeper or clerk, in his secluded room, inspects the pages of his ledger and renders the verdict that he finds no item exactly earmarked for such purpose, or that an item so earmarked has not quite sufficient balance. The remedy is to apply for a transfer of funds, but this means delay because of the necessity of talking to and convincing those who, perchance, have not, heretofore, given thought to the proposition. I am not an advocate of segregated budgets. I do, however, believe very thoroly in three principles in connection with budgets, as follows:

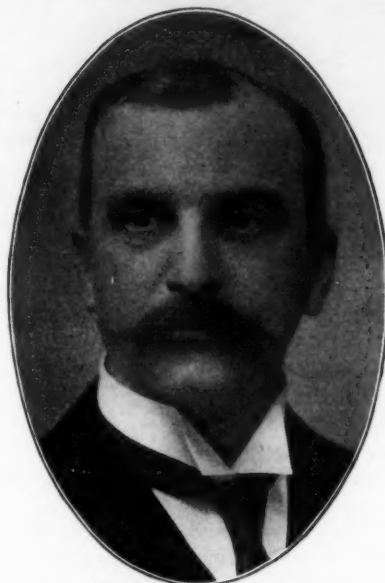
1. The preparation of estimates in convincing detail.
2. The actual budget allowances by totals, and not by details.
3. Functional statistical accounting in detail at the end of the year.

1. The Preparation of Estimates.

At the time an estimate is prepared there should be a free, open and unhurried examination of, and discussion about, school activities. An educational inventory, so to speak, should be taken, and facts, figures and information should be exhibited in sufficient detail to show the then condition of the school activities, the things which it may be necessary to do in order to maintain the several activities at their greatest efficiency, and such enlargement as may be determined to be necessary or advisable, or both.

2. Budget Allowances by Totals.

If there is any one thing that is essential to a system of education, it is *continuity* of educational policy. Here, if nowhere else, revolu-



HON. HENRY R. M. COOK,
New York, N. Y.

Hon. Henry R. M. Cook, President of the National Association of School Accounting Officers, is the Auditor of the Board of Education of the City of New York, and is one of the ablest and best known Certified Public Accountants in the State of New York, having been enrolled in 1883. He is a lawyer and forceful writer upon scientific and professional subjects.

In addition to his present position of Auditor of the New York City Schools and President of the National Association of School Accounting Officers, Mr. Cook has held the following positions of note:

State Examiner for the Board of Regents of the University of the State of New York.

President of the American Association of Public Accountants.

President of the New York State Society of Certified Public Accountants.

Professor, New York University School of Commerce, Accounts and Finance.

Mr. Cook has a wide experience in railroad and commercial accounting, auditing and organization, and is a specialist in municipal accounting and school administration. He was a pioneer in the improvement of school accounting and statistics in the school charter revision following the consolidation of the Greater City of New York.

Mr. Cook originated the Free Lecture system in New York City in 1888, and in 1900 framed the school law regulating the compensation of teachers. He was also the organizer of the School of Commerce, Accounts and Finance of New York University (N. Y. City), and was one of its first professors. This school is now the largest of its kind in the world. In 1894 he originated the first Public School Teachers' Retirement law of the State of New York.

tion is disastrous. It is for that reason that boards of education, as a rule, are continuing bodies. As such they should not be too closely held down to the lines of their departmental estimates, which in New York City is prepared in May, considered in October, and applicable to the following calendar year. The great bulk of educational funds, in any event, goes to pay for the basic educational activities as organized in the regular elementary and secondary schools. The only latitude which a board of education may exercise, practically, is in connection with those matters which are known as "fads," and, in the final analysis, each of these must stand or fall thru public support or a lack of it; consequently it is impossible for a board of education to spend funds unwisely, looked at from the point of view of the public; which is to say, it is impossible to spend money in a school system in any considerable amount or for any length of time on propositions which have not public sup-

port. This being so, I believe that the fewer heads under which funds are granted to boards of education, the better it is. The money voting body should grant funds by totals and not by details. Discretion should be vested in the board of education as to volume or extent of the several educational activities as to whether such activities need expansion or contraction. The board of education is as truly representative of the people as the money voting body. Each has a separate function to perform, and neither should undertake to do the work of the other.

3. Detailed Functional Statistical Accounting.

I believe the solution of the matter lies not in segregated budgets, but in standardized statistical accounting. In this direction the board of education of New York City has done considerable pioneer work. I believe that at the end of the fiscal year there should be a publication of the year's experience, expressed in terms of cost of activities (preferably on the hourly per capita basis), number and character of activities, and statements of plant and equipment, uses of same, etc., etc., and other matters of interest. I believe there should be a common terminology used by boards of education so that there may be an exchange of experience as between different school systems. That is the end to which I have been working for a number of years past.

In Philadelphia I think they have taken a step in the right direction—their budget for 1914 appears to be largely desegregated, altho clearly functionalized, so that funds have been granted in bulk and under few titles, thus permitting the Philadelphia Board of Education to carry out its educational policies smoothly and connectedly. The Philadelphia Board in common with those of other cities in the State of Pennsylvania is fortunate in possessing considerable independence and I feel that it must be a source of gratification to it to be able to conduct its work free from the financial entanglement from which many boards of education of other cities in other states suffer.

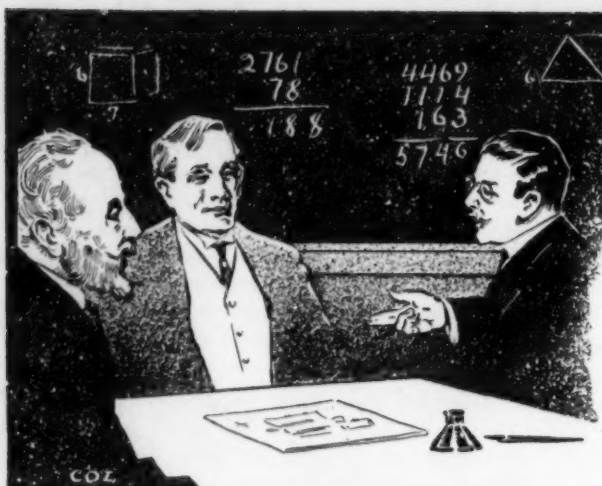
I am of the conviction that the segregated budget hinders, rather than helps school administration. It is, in my judgment, not too much to say that under a segregated educational budget, initiative is stifled, accomplishment lags, and enthusiasm is likely to be dissipated in the unwinding of red tape.

Cost Data.

One of the most fertile fields for the educational amateur, reformer and enthusiast, is the subject of costs. How they do gambol with the innocence of young lambs upon the velvet sward, sometimes jostling each other in the exuberance of their joy and irresponsibility, playfully batting their heads together in their efforts to be "it!" Some institutions of higher education have turned out many flocks of these little lambs and their theses have obtained for them the usual collegiate honors. Their inspirations, when published, are frequently regarded with awe and with admiration by those who are not engaged in the real practical business of education. Actual experience is unnecessary,—all that is required to produce these academic treatises are the facilities of the library, some pencils and a pad, the imagination and exuberance of youth, coupled with the exultation incidental to the exalted age.

How many of such offerings are worth the paper upon which they are written? How many of their authors have had practical experience in school affairs? How many of these enthusiasts are conversant with the real difficulties of school management, and the practical problem of weaving the raw material into educational cloth?

(Continued on Page 77)



THE SELECTION OF EQUIPMENT FOR PHYSICS AND CHEMISTRY LABORATORIES

A. C. Norris, Rockford, Ill.

During my experience of sixteen years as a teacher of physics, chemistry and other high-school sciences, I have found that the superintendent, principal and members of the school board like to visit the science laboratories, inspect the apparatus and watch the pupils at work. They find there more freedom among the pupils than in the formal classrooms. The instructor is on more friendly terms with his pupils, and if he is of the right sort, he is out among them, helping them with their apparatus, quizzing them in regard to their results and encouraging them to think clearly and do their best.

As a rule, they will find something interesting going on, or at least such should be the case, for today these two sciences are adding more to human knowledge and invention than all the other high-school subjects combined. Airships, the X-rays, moving pictures, wireless telegraphy, radium and certain phases of scientific agriculture are but a few of the wonderful and useful products of these two sciences.

It is a very poor teacher, indeed, who cannot interest and instruct his pupils wisely in physical science, if they are all supplied with sufficient apparatus and materials to do the tasks assigned to them. High school pupils like to work and will work overtime if they are doing something worth while. In this article, I wish to emphasize some of the important factors which make for success in teaching physics and chemistry.

This is not written with the idea of criticism in mind, but simply to bring out a few points that have been gathered together by an experience of a score of years in laboratories as either student or teacher. Usually, school board members are anxious to do the best they can for each department of the school, but wisely they like to know the use of a certain piece of apparatus or list of chemicals before they pass approval for its purchase. If the instructor cannot give a good and sufficient reason for wanting an article, it should be denied him. If, on the other hand, he is enthusiastic and alive, he will have all the apparatus he can use in his work and the board will take delight in buying something to help enrich the instruction along the lines of automobiles and all the other interesting problems covered by these two sciences.

Mr. School Board Member, if your school has poor equipment in physics and chemistry, you had better change instructors and secure one who will fill you with enthusiasm in providing apparatus and materials for his department. Hire a man who can analyze a sample of soil for some progressive farmer in your neighborhood, or superintend the wiring of the bell system connected with your program clock, or help the county coroner when he has a case of suspected poisoning to decide. He may ask you for a fine chemical balance, or an accurate set of electrical measuring instruments, but really isn't he worth all he costs when you consider what an inspiration he is to your community?

Laboratory Rooms.

The school laboratories should be large, well lighted, well ventilated rooms having a north and west exposure, if possible, and one-third as much glass as floor space. Too often the laboratories are placed in the basement with all these features at their worst. Place your laboratories in the top story and then all of the noxious chemical fumes may be carried up thru the roof into the open air. The writer spent a very unhappy year with his laboratories under a large assembly room. The next year they were moved to the attic and everyone was better satisfied. Fifteen square feet of floor space per pupil constitute the standard measurement for school laboratories. The floor should be sound-proof, so that the continual tread of the pupils at work will not disturb the occupants in the rooms below. Cement floors are not satisfactory. They are noisy, easily acted upon by acids dropped by careless pupils and tiresome to stand upon for any length of time. The best floor is one of hard wood, kept well oiled with a dust-laying, water-proof oil. If the walls are painted, lead should never be used as it will darken too soon. Zinc oxide is for laboratories the best of any of the mineral paints. The temperature of the room should always be kept above the freezing point, so that the plumbing, reagent bottles and electric batteries will not be damaged by the cold.

Laboratory Furniture.

It may be that what has been said about the rooms is not applicable in your particular school. If the laboratory is firmly established with the necessary gas fittings and, other plumbing, it may be impossible to make a change as to location. But when it comes to the subject of furniture, almost any school can very easily enlarge or change its present installation to suit any condition. The furniture in laboratories should be built for both service and appearance. It should be simple in outline, with as little chance for dust to collect as possible. The furniture necessary for a chemistry laboratory is as follows:

1. Tables.
2. Cases for chemicals and glassware.
3. Hoods for offensive gases.
4. Shelves on sides of room.
5. Drawers for small articles.
6. Stools.
7. Book shelves.

The most important and expensive of these articles are the tables. It is impossible to enter into a detailed description of a laboratory table without encroaching upon the field of the architect or furniture designer. Some general ideas may be stated that will not be out of place. For eight pupils, the table should be twelve feet long, four and one-half feet wide and three feet high. It should be provided with drawers, at least seven inches deep and other dimensions in proportion. It should have cupboards for the tall bulky apparatus. Both drawers and cup-

boards should be provided with padlock eyes, so that each pupil may furnish his own padlock. When regular locks are installed in the laboratory table, much trouble is caused by the rapid rusting due to the corrosive fumes always found in a chemistry laboratory. Two sinks should be placed in each table. As yet, no satisfactory material has been found for the sinks. Sheet lead and soap stone seem to be as good as any material. At the close of each laboratory exercise the sinks should be thoroughly flushed out with clean water so that acids and alkalies may not stand in them over night or even longer. A little care on the part of the instructor will lengthen the life of a sink several years. The tables should be at least five and one-half feet from each other and from the walls. On top of the tables should be shelves for the more important reagent bottles. Wooden shelves with plate glass partitions seem to be the best for this purpose, as they are substantial and allow an unobstructed view of the entire room.

Laboratory Table Tops.

I have found wood, protected with an acid-proof, water-proof coating to be the best material for all laboratory table tops and shelving. Soapstone, tiling, slate and other materials are soon discolored, cracked, corroded or even eaten full of holes by acids and alkalies. All of these materials are very destructive to glass and porcelain ware for two reasons, viz.: (1) a hot dish placed on a cold surface will break, and (2) a brittle dish dropped ever so small a distance upon a hard surface cracks. These may seem to be minor points, but in the course of ten or fifteen years they mean a great deal to a community. It always makes me feel badly when I see a nice piece of apparatus broken by a careless pupil.

The formula for the coating given below was obtained from the University of Wisconsin and is not original with the writer. It requires a little patience in applying it, but it is well worth the time and trouble as it is very serviceable.

Solution A.

Crystallized copper sulphate.....125 grams
Potassium chlorate125 grams
Distilled water 1 liter

Boil in porcelain or glass dish until both salts are dissolved.

Solution B.

Aniline oil125 cubic centimeters
Conc. hydrochloric acid..175 cubic centimeters
Distilled water700 cubic centimeters

Clean the table of dirt or varnish down to the wood and apply with brush two coats of solution A, putting the second one on as soon as the first one is dry. Put both on boiling hot. Now apply two coats of solution B and allow to dry thoroly. With a piece of cheese cloth apply a very thin coat of raw linseed oil. When thoroly dry, wash off excess of oil and stain with boiling hot soap suds. This treatment leaves the tables with a dull black polish which will resist

acids and alkalies for years if wiped off as soon as spilled on by the worker.

Cases and Shelves for Chemicals and Glassware.

One almost universal lack in every laboratory is sufficient room for apparatus and materials. Store rooms are crowded and therefore unsightly. Apparatus is piled up in corners, relegated to basement or attic where mice and dust soon destroy it. Every available foot of wall space in a laboratory should be lined with large, roomy cases or shelves, and these should be kept neat, clean and tidy. The cases in the chemistry laboratory should be divided into drawers, shelves and cupboards. The shelves should be arranged in tiers. One nice arrangement is to have the tiers three in depth, each section resting on a wide shelf. This allows four tiers of shelves to every 22 inches. These tiers of shelves are wide enough for bottles of chemicals and all kinds of apparatus, such as evaporating dishes, flasks, beakers, graduates and mortars.

The shelves on the walls, for chemicals in use by pupils, are features that many architects do not take into consideration. As a consequence, window ledges, tables and chalk trays serve the purpose of good, neat shelves. The wall shelves should be six inches wide and placed at least nine inches apart. Do not be stingy with shelves! Then insist that they be kept neat, clean and tidy. These shelves, as well as all other woodwork coming in contact with acids and alkalies, should be treated with the acid-proof coating. It is far superior to paint or varnish.

The hoods in a chemistry laboratory are sometimes far in excess of the demand. Two well ventilated, roomy hoods with a shelf about eighteen inches from the floor will be sufficient for a class of 24 students. A tactful teacher will not allow those experiments which contaminate the air of the room to the extent of suffocation. He will have the amount of reagents used cut down so that all may do the experiment on a small scale and then one pupil will work under the hood and make the gas in large enough amounts to try all common tests upon it. Chemistry will become more popular in your school on this account. Pupils should not be poisoned with chlorine, hydrogen sulphide and bromine even if the manual does call for vast quantities of the gas to be made. We use the hood in our school about once a month.

Somewhere in every chemistry laboratory there should be a bank of about fifty small drawers for all sorts of small articles, such as corks, labels, test-tube cleaners, copper wire, twine, sheet copper and lead, glass cutters, blow pipes, etc. You will find such a lot of drawers in every well equipped drug store. In fact, a druggist is a good man to consult when equipping and furnishing your chemical laboratory.

The stools in a chemical laboratory should be 24 inches high, while those in a physics laboratory should be eighteen inches high. Get good substantial stools and have a number of extra rounds thrown in, so that the janitor may quickly replace a broken one. A wriggling 160 pound football player, trying to figure out a difficult chemical problem, is hard on the ordinary laboratory stool.

Physics Furniture.

With a few exceptions the furniture necessary for the physics laboratory is quite similar to that of the chemistry laboratory. The tables should be 31 inches in height, with substantial standards for building up apparatus, such as pulleys, pendulums and all lever experiments. A very convenient size is four and one-half feet wide and seven feet long. In some laboratories, the tables are supplanted by wide shelves around the room. Upon the walls are

placed many of the pieces of apparatus liable to error when jarred, such as delicate balances, galvanometers, barometers and many others of like sensibility. For high school work, however, this arrangement is not as satisfactory as good substantial tables placed in the center of the room.

Do not forget the apparatus cases, bank of drawers and wall shelves. The physics laboratory should have a demonstration table about twelve feet long and three feet wide. This table should be provided with large sink, electricity from city current, compressed air, large drawers and cupboards. When a difficult piece of apparatus is to be set up, the instructor may use this table to put up a model set. Demonstrative experiments may also be performed by the instructor at this table. Every laboratory should have a book shelf with from twenty to forty good reference books and a good dictionary.

The Dark Room for Photography.

It is a part of a liberal education today to understand the principles of photography. The dark room need not be large, say ten feet by twelve feet. A class of eight can then easily work in such a room. The room should have shelves, tables, running water, double doors, electric lights and an air shaft for ventilation. The expense of running the dark room is not great. The pupils are glad to furnish plates, films and printing paper, so the only outlay is in the solutions used in developing and printing. The school should own a good camera, so that the pupils will get good results with their plates. It is almost a crime for a manufacturer to put together a little glass and wood and call it a camera. My advice to all my pupils is to never buy a cheap camera. It is far better to go without, than to get the impression that photography is only for the expert. With a good camera what is more delightful than to take pictures of school friends and school events? By all means, fit up a dark room in your school, if you have none there already.

The Lecture Room.

This room should have a fully equipped demonstration table, with all the conveniences possible. There should be a seating capacity of from sixty to one hundred with raised seats. A lantern and curtain should have a place in this room. The walls of the room should be covered with charts, pictures and demonstrative apparatus, such as barometers, large thermometers, large galvanometers, etc. The ingenious teacher will make this room one of intense interest to all lovers of physical science.



DR. JOSEPH SWAIN,
President, National Education Association,
St. Paul, July 4-11.

The Store Room.

This room should be lined with large shelves and drawers, small drawers and cupboards. A very ingenious device is to have the store room so arranged that the drawers and cupboards along one wall may open into the lecture room. There should be separate store rooms for chemistry and physics, as the chemicals are very corrosive to the metal parts of the physical apparatus. The apparatus in these rooms should be so arranged that an inventory may be quickly and accurately taken.

Some Mistakes of Teachers and School Boards.

The first mistake made in equipping a laboratory is trying to buy everything the textbook or manual demands with a few hundred dollars. This results in the installation of poorly made apparatus which proves a constant source of annoyance and discouragement and is anything but satisfactory to either the pupil or the teacher. It is always best to buy good apparatus and if it cannot all be bought in one year it is far wiser to string it over a period of two, three or five years. There will then be something in the laboratory that will be satisfactory and something that will give results and be a source of inspiration and satisfaction to both instructor and pupil. If you buy cheap apparatus, you will soon have nothing to show for your money but a lot of junk. But if you gradually buy good equipment, you will have no trouble in attracting to the position desirable instructors. Even Old Dobbin, the horse, trots along more contentedly when he is hitched to a newly painted buggy in a nickel plated harness, than when attached to the ash wagon with old ropes for tugs and the bridle patched with copper wire thrown away by the telephone company.

Another mistake made by school boards is allowing the teacher to keep his laboratory in a careless and untidy manner. If you hired a man to work in your store or shop or on your farm, you would insist that he take care of his equipment. If a piece broke, he would report the accident to you and something would be done at once. But in the average laboratory, when something is broken, it is usually thrown aside and when a new man gets into the place, he will decide that it is not worth bothering with and orders the janitor to carry it to the dump. At the end of the year, all broken apparatus should be repaired and stored away so that it will be ready for use at a moment's notice. The local tinner, blacksmith, carpenter, electrician and jeweler can often do this work as well as the apparatus houses. A good science teacher prides himself on being able to keep his apparatus in order, without calling in local talent. Mr. Reader, do you know whether your laboratory has a lot of old broken apparatus in it that can be made as good as new for a few dollars? Look into this subject and see if what I have said is true in your case.

A laboratory section in physics should not number more than 24 pupils, divided into twelve pairs. There should be a set of apparatus for each pair, so that all may be working on the same experiment at the same time. The teacher can give definite directions and expect definite, uniform and independent results. A common mistake is in not having enough apparatus to go around. No teacher can do as good work, if he has from three to a dozen different experiments going on at once, as he can with one or two well directed ones. If you cannot afford to get apparatus for forty experiments, it is far better to do twenty well and then increase the number by a few each year until you have a well equipped physics laboratory.

Many teachers complain that they have no trouble in getting large pieces of apparatus, but

(Continued on Page 80)

Standard Units of School Measurements

Geo. W. Gerwig, Secretary, Board of Education, Pittsburgh, Pa.

An American corporation has the reputation of having developed the finest type of efficient service in the world. In attempting to explain how this has been accomplished, a gentleman stated recently that it was due to the efforts of one who combined the qualities of a Prince of Merchants and of a Prince of Accountants. The world is generally recognizing today that the business man is in some particulars its best teacher. The most effective lesson taught by the business man has been the application of cost units to the correction of defects and to the measure of progress.

The supreme achievement in this particular has been, of course, the Panama Canal, which is fully as much a triumph for the accountant and his device, the cost unit, as it is for the engineer and the sanitarian. From an accounting standpoint the building of the canal was both simple and stupendous. It furnishes the supreme example of the value of cost units because of the opportunity to repeat an essentially similar operation thousands of times under substantially similar conditions. In one way it may be said that the Panama Canal stands at one extreme of simplicity while school accounting stands at the other extreme. It made no difference to the millions of yards of dirt how each was removed; the only problem was how to make each day's excavation more speedy and more economical than the preceding one. It made no essential difference to each of the millions of yards of concrete how it was installed so long as the specifications were complied with and so long as there was a constant increase in speed and efficiency, together with a decrease in cost.

Measuring Human Progress.

The material, however, in school work is neither dirt or concrete and it often makes a vital difference to a child how the machinery operates. Saving in speed or in economy may be attained at a final cost to the human product which makes it not only expensive but often absolutely indefensible.

Our problem, therefore, is to find some way of adapting to this human process as many of those elements of success from a purely mechanical achievement as will prove really valuable in our new relations. Perhaps no single factor will be as effective in school progress as the working out of some standard unit of measurement by which, using graphs, the failures of the past may be checked and the progress of the present indicated. This has been admirably done by the Russell Sage report on forty cities. This standard must be simple, fair, easily applicable and so far as possible, unchanging. If we carry ourselves back mentally to the time when the foot rule was either unknown or not used, or if we attempt to deal in the simple relations of life by using feet one minute and meters the next, or, if we attempt to determine dimensions by applying a rubber band which is either short or long at will, we will realize concretely some of the difficulties in the present situation.

The keynote of all effort in efficient management is the standard unit of measurement and its application and the underlying principle is being applied everywhere as the Ton Mile, the British Thermal Unit Test, Horse Power or the Watt Hour, indicated, and shown, more and more, by graphs and illustrations.

The Difficulty of the Task.

The task of applying the standard unit of measurement in school work is not only difficult,

NOTE—Address before the Association of School-Board Accounting Officers, Memphis, May 20, 1914.



HON. GEORGE W. GERWIG,
Pittsburgh, Pa.

because of the diversity of the work but also because there is a double human factor on the one hand in the employe, in many cases a woman teacher, and on the other hand the material, in this case, the pupil at the most flexible and impressionable period of a child's life.

Pittsburgh recently undertook to apply to all of the business of its schools the best practice of either a private business or of a well managed corporation. It was soon discovered, however, that public business cannot be conducted on the identical lines of either of the above, and that such an adaptation must be made of the best practice of a private business and of a well managed corporation, as will be applicable to the conduct of a public business.

The task before one who attempts to evolve a standard unit of measurements for all phases of the school business is the extremely difficult achievement of combining a wide angle of vision and a sharp, clear-cut focus. It is not possible to evolve one single unit for the measurement of all school activities any more than it is possible to combine the pound, the quart and foot in one unit, but we can avoid using inches, feet, yards, rods, miles and perhaps even meters indiscriminately for things which may all be reduced to a standard foot measure. We can also avoid and this is extremely important, publishing comparisons which are misleading and valueless because they are not comparisons in like terms.

Some Actual Units of Measurement.

In all new building work there should be prepared a program and details of construction and equipment. This program should indicate clearly the type and quality of the proposed school plant, together with the classification and sub-divisions of the work. It will, of course, be conditioned upon the State laws, the building code or any other limitation which applies in any particular school district, or to the school plant to be erected.

The following suggestions are offered for consideration in attempting to secure a set of standard units for the measurement of achievement and efficiency in the various departments of public school work.

- I. LAND—Cost per square foot.
- II. NEW BUILDINGS—Cost per cubic foot with standard rule for determining cubage.
 1. Building—
 - a. General work.

- b. Heating and ventilating—include plant in operation.
 - c. Plumbing—include all fixtures permanently connected.
 - d. Electrical—include all fixtures except lamps and glassware.
2. Landscaping and Abnormal Foundations—see

Standard Rules for cubage on Normal Foundations—Program and details of construction and equipment by C. L. Wooldridge, Superintendent of Buildings, Pittsburgh Schools.
3. Equipment—include all furniture, pictures, industrial equipment and tools.
4. Architects' and Engineers' Services.
- III. REPAIRS—The percentage of the annual depreciation, say two per cent (2 per cent) per year for fifty years.

Any repairs in excess of this amount are in fact betterments, because they develop the building to something a little beyond its normal standing for that year.
- IV. OPERATION—Service expense cost per pupil.
 - a. Heating, cubic foot.
 - b. Light, cubic foot.
 - c. Power.
 - d. Water.
 - e. Cleaning, per square foot, or if preferable, retain the same cubic foot standard as used for other heads.
 - f. Sanitary service, towels, drinking water cups, etc.
 - g. Phone.
- V. INSTRUCTION.
 - a. Salaries, cost per pupil per hour instructed.
 - b. Books, additional material and supplies, cost per pupil per hour instructed.
- VI. ADMINISTRATION.
 - a. Cost per pupil per hour instructed.
- VII. SOCIAL CENTER ACTIVITIES.
 - a. Lecture instruction. Cost per attendant per lecture.

Comments on These Units.

1. *Grounds.* Probably no better unit can be secured in this instance than the cost per square foot.

2. *Buildings.* There is a general recognition of the need for a method of applying uniform standard measurements in computing the cost of buildings. The cost per cubic foot is widely used, but unfortunately there is as yet no standard rule for figuring cubage. The practice for computing roofs and cornices varies. Some cities count and some omit foundations. The published figures for one city on one building may be extremely pernicious because they pretend to present reliable data and yet fail to make the only kind of a comparison which is of any value, namely, a comparison in like terms.

In order that cubage figures may have significance or have value, there should be, in addition to a uniform method of measuring, clear indication of any deviation in partitions or subdivisions which would make a given building differ from the standard type. Unusual windows or other openings should also be indicated and noted. Variations in materials will of course, be noted. A model program of this type has been prepared by and may be secured from C. L. Wooldridge, Superintendent of Buildings, Pittsburgh Public Schools. He has prepared a set of rules for figuring cubage, particularly in

(Concluded on Page 76)



VISUAL INSTRUCTION AND ITS MANAGEMENT

A. W. Abrams, Chief of Division of Visual Instruction New York State
Education Department

General Advantages of Pictures as an Aid to Study.

Pictures were in use to express ideas before our alphabet was invented. Pictorial reproductions and graphic representations have today become a common means of conveying thought and expressing feeling. Facilities for making pictures have become almost unlimited and the art of securing excellence of quality has been developed to a wonderful degree.

Pictures, rightly studied, awaken interest, challenge attention, give accurate primary notions, stimulate thinking, make ideas clearer and more vivid and deepen mental impressions. These are no small advantages in the process of education.

The eye is so large a factor in the acquisition of knowledge that "to see it" has become a figurative expression to indicate that something is comprehended. Try to follow a military campaign without maps, to read a description of a cathedral without pictures of it, to study a plant from a book without illustrations, or even to visualize the dwellings, dress and manners of a strange people by the aid of language alone. At once you recognize the inadequacy of mere words.

Form, position and color are primary factors in almost all we know of the objective world and in many of our feelings. These factors, for most persons, are presented to the mind chiefly thru the sense of sight. It is well understood that a word is but a symbol. Its significance has been learned by more or less numerous associations with the thing signified. The student of a particular subject, such as Gothic architecture, may get beyond the need of pictorial aids when thinking in this particular field, but the moment he enters a strictly new field, say glacial phenomena, he experiences the need of a more concrete presentation of facts and relations. The use of visual aids in instruction and learning, then, is not a practice adapted only to children. Such aids, in the absence of the things represented, are needed whenever one enters a field of learning dealing with the material world or attempts to make any large advance in such a field previously studied.

Pictorial Material for Study.

Pictorial aids may be considered under two headings, prints and lantern slides. A print may be regarded as a picture made by a photographic process or by any one of the several methods of printing. A stereograph is only a pair of photographic prints made in a particular

way. A lantern slide has the image printed on glass. The picture is projected, much enlarged, upon a screen by transmitted light from a stereopticon, or projection lantern.

Special Advantages of Prints.

A print is suitable for individual study rather than for class instruction. It may readily be used in immediate connection with study thru reading. The student may come back to it as often as he has occasion to do so. As a school aid, it is in the same class with the schoolroom reference books or library. In some form or other prints can be collected and used in any school or library.

Stereographs, because of the optical principles according to which they are made, give more depth, or perspective, than the single print. Figures stand out more noticeably. In some subjects there is considerable advantage in this, the photographic perspective is not true perspective and the error is somewhat exaggerated in the stereograph. The pictures are small and the use of a stereoscope is necessary to get the stereoscopic effect, but they are all made in a standard size and are very convenient for filing and distributing. For some subjects they cannot be made at all.

Special Advantages of Lantern Slides.

The lantern is pre-eminently the apparatus for visual instruction. The pictures can be made large enough to be seen at one time by every one in the room. The attention of every member of the class can be directed to the same thing at any moment, which is essential in class instruction. As most instruction must be given to pupils in classes, the advantages of slides over prints are obvious. The purpose of each should be regarded as somewhat distinct from that of the other.

Lantern Equipment.

The lantern outfit is comparatively inexpensive. For general use in slide projection it should be as simple as possible. Get a standard lantern. Avoid one advertised for its unique features. The more adjustments it has the more likely it is to get out of order. A lantern consists essentially of a lamp for furnishing light, a system of condensing lenses for gathering light, a slide carrier, a second system of lenses for projecting the image and a body for holding these parts in proper adjustment. This body should be simple. It may be very inexpensive and yet entirely satisfactory in point of serviceability. It is of first importance that the objective should be of good quality and give a flat field, that is, it should give an image on the screen that is in perfect definition thruout. Test this by use of a map slide having small lettering both in the center and the corners. All the letters should appear clear and black. Reject a lens not giving such results.

Cost of Lantern Equipment.

A good, serviceable lantern can be purchased at a cost of from \$25.00 to \$30.00. If electricity is used as an illuminant, a rheostat is required.

The fixed form, fifteen amperes, is satisfactory for slide projection work. It costs from \$6.00 to \$8.00.

A movable lantern stand is a great convenience and economizes time. It should have castors on two legs. The lantern, rheostat and cable for connecting with the electric circuit should be kept on the stand ready for use at any time. It is not necessary to have a separate outfit for each room. Such a one as is here described can readily be moved into any room and quickly put to use.

For classroom use a large screen is undesirable. One 6'x6' is large enough. It should be as nearly opaque as possible and should reflect a soft, white light. Avoid a screen with a metallic coating. Such a screen will give a harsh picture when viewed from directly in front; seen at an angle of 30 degrees, or more, it will not reflect much light. A good screen, 6'x6', mounted on spring roller, costs about \$4. It is not advisable to make a practice of transferring a screen from one room to another.

Electricity is the most effective illuminant. It is also the cheapest and easiest to operate. Whenever a new building is erected classrooms should be wired for the use of an arc light. The added cost is not much.

Where electricity cannot be used, acetylene from a tank is recommended. Generating this gas from carbide, as it is to be used, should be discontinued. Do not bother with kerosene, alcohol or any other illuminants sometimes offered for lantern use. The calcium light is good, but expensive. It is now little used.

The darkening of the room is a simple matter. Do not attempt to run opaque shades thru grooves of any kind. Ordinary lantern work does not require it. Hang the shades in the usual way but see that they are wide enough to overlap the window casing by three or four inches.

An outfit suitable for classroom instruction has been described. The lantern for an assembly hall need not be different from one for use in the classroom, except that, if the light needs to be thrown a long distance, say 60 or 70 feet, the objective must be of a longer equivalent focus. The screen, of course, should be larger.

Selection of Pictures.

Pictures are not all of equal value. It is of the utmost importance that a judicious selection be made. Much time may be wasted, or at least spent with little profit, thru the use of a promiscuous collection of pictures. It is organized knowledge which counts most in education. Pictures are only a means. The end is the presentation of some topic in a carefully considered course of instruction. The educational value of pictures varies quite as much as that of books. The unimportant ones should be rigidly excluded in making up a collection. Making a careful selection involves elimination, varying, of course, with the uses to which they are to be put.

In arranging a course of laboratory exercises in biology, it is rather definitely determined how much time will be given to this phase of study. Types are selected. Balance is secured. So it should be in visual instruction.

The quality of the prints and slides selected should be of the best. In art and in some other subjects much that is essential is lost from the use of illustrations of inferior quality.

Subjects to be Illustrated.

The study of most subjects pursued in school may be aided by the use of pictures. For some, visual aids are quite essential. Naturally one thinks of geography, including industries, as one of these.

Theoretically nature study should be conducted by direct observation. In practice much of it cannot be taken up in this way. Pictures are much used, but frequently too few aspects of the objects studied are presented.

Art is a splendid field for pictorial illustrations. What cannot be done with painting, architecture and sculpture thru visual aids! Composition, design, balance, rhythm and other essential elements of art should be freely illustrated by excellent pictorial reproductions of selected and graded examples of the world's best art. We should probably all be much more sensitive to what is beautiful and what is ugly about us if we had had the opportunity for such concrete instruction.

It has been customary for the science teacher to have the first, if not the exclusive, claim on the use of the lantern of the school. There seems to be no good reason for this practice. Almost any teacher can manage the use of a lantern, a piece of apparatus about which altogether too much mystery has been thrown. There is perhaps less occasion for the use of the lantern by the teacher of physics than by the teacher of history. In physics things and processes themselves are studied or else apparatus illustrating principles involved. In history there is need of creating a correct mental picture of a past that is forever out of reach except as it can be brought back by indirect means.

Visual aids are needed for several other subjects. The study of physiography depends much upon pictures, including drawings. Biology, which is largely a descriptive as distinguished from an experimental science, is much in need of pictorial illustration. In so far as good composition results from clear and vivid ideas, pictures may be a decided aid toward both oral and written composition. In literature we have word pictures, often adequate but

sometimes helped by a physical representation of scenes described.

There is hardly a grade or a class in the elementary school or the high school, outside of mathematics and grammar, that might not profit by the use of visual aids properly selected and used. Most teachers do use such aids to some extent. Can this instruction be better provided for and directed?

How a Collection May Be Made.

Slides and photographs may be purchased from the trade or may be made under the immediate direction of the collecting institution. For a state, a university or a library, acting as a distributor for a large territory and requiring many duplicate copies, the latter method has several advantages. A very large city might profitably pursue the same course. In other cases direct purchase may be the only practicable course.

The practice of the New York State Education Department is to procure first class, original negatives, usually 8 by 10 inches in size, and to make as many slides and photographs from them as the demand of the thousands of institutions embraced in this Department requires. This plan has much to commend it. The authenticity of the pictures can be assured. Both prints and slides can be made from the same negative. A single catalog answers for both slides and prints. Duplicate slides and prints can be made promptly and cheaply. A higher standard of quality can be secured. Uniformity is made possible in particulars where uniformity is important, for example, in photographic mounts. For many important subjects it is difficult, if not altogether impossible, to procure from the trade an organized collection of pictures. Very many of the slides and photographs offered for sale, especially for history, literature and art, are copied from inferior pictures in books and other sources and the source of a picture whatever it may be is not indicated.

The first cost of procuring original negatives of carefully selected subjects is considerable, but when the use of them is to be continued and extensive the investment is good economy.

If the collecting institution cannot proceed in this line, it needs to rely upon established dealers and upon the photographic work of special students in selected fields, scientific societies, museums, art galleries, etc. Very much good useful material can be obtained from these sources. The choice of material in any case should be in charge of a trained person who is a competent judge of photographic results and

is familiar with the problems involved in circulating a collection.

How to Handle a Collection.

A collection of pictures without supervision to insure proper distribution and use is bound to be of as little value as a collection of books placed on shelves without a librarian.

An individual teacher may make a collection of slides and prints and keep them always right at hand, but no school or other institution can ever develop visual instruction in any broad and effective way on this basis. Carefully selected slides and prints of good quality are too expensive to multiply unnecessarily or to be allowed to lie idle most of the time. They need to be circulated.

There must be suitable cabinets, an expansive system of cataloging, a convenient application form, set times for drawing out and a settled means of delivery. A vertical system of filing both for slides and photographs is recommended. There should, of course, be uniformity of cataloging, labeling, etc. In short, the business must be handled like that of a well organized library and a competent person must have the oversight of it.

Educational Extension.

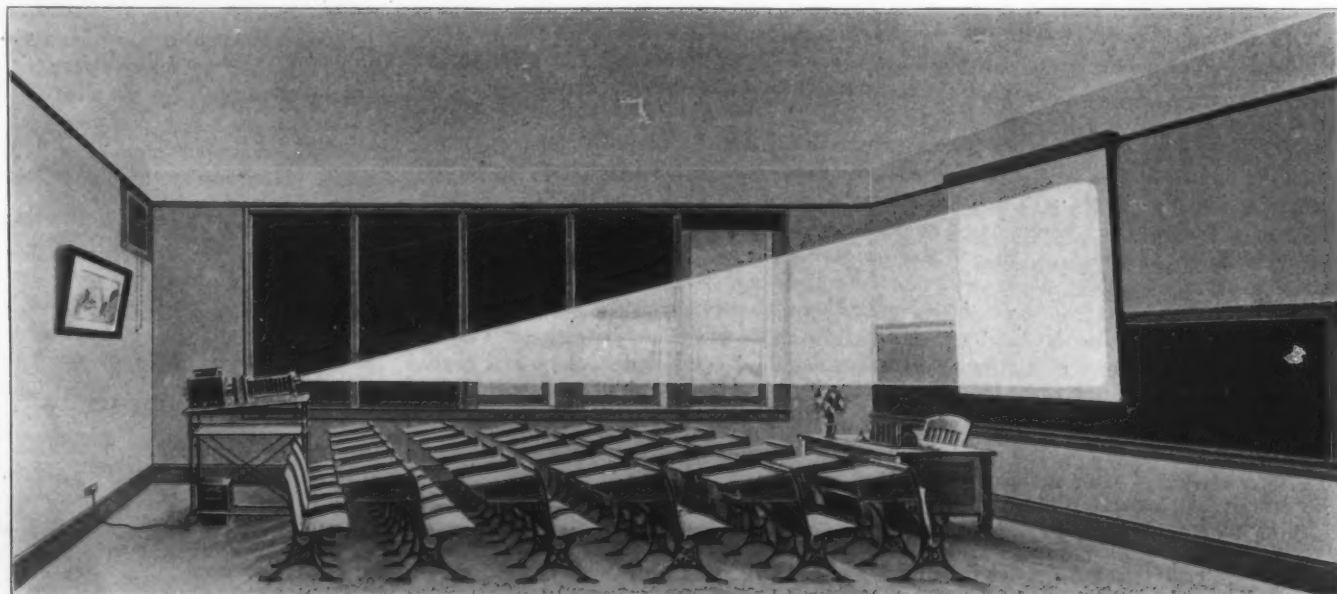
I have thus far referred to the use of visual aids for formal instruction in schools. They are particularly well adapted also for the use of study clubs, social centers, churches and popular education generally. While the material prepared for school use may be used for educational extension also, the latter use calls for many groups, or sets, of pictures of popular interest; conservation, forestry, sanitation, safety devices, playgrounds, children's gardens, public welfare, etc. Well prepared explanatory notes should be furnished with such sets. For school use, on the other hand, it seems better to provide only very short notes, if any at all, with full and accurate title of each picture and references to convenient sources of information. The educational value will be increased if teachers and pupils are required to use books in connection with the interpretation of the pictures.

Pedagogy of the Use of Pictures.

Notwithstanding the general assent to the potential value of pictures as educational aids, no adequate statement seems to have been made of their limitations or of the manner of using them to insure the best results.

Visual instruction and showing pictures are by no means the same thing. Seeing pictures may result in little or no mental growth. A

(Concluded on Page 79)



TYPICAL SCHOOLROOM WITH LANTERN EQUIPMENT.

The illustration shows accurately the method of darkening the room, the small screen attached to picture molding to avoid defacing of wall movable metal stand, lantern connected by short cable with electric circuit.

CONCENTRATION OF BUSINESS FUNCTIONS IN PUBLIC SCHOOL ADMINISTRATION

William Dick, Secretary Board of Education, Philadelphia, Pa.

Altho there are many phases of school administration upon which much may be said, still all are embraced in the two distinct divisions of school control: that which pertains to the financial and physical conduct of the schools, and that which includes the educational or pedagogical functions of the school system. This paper will emphasize the necessity of correlating the work of these two offices or departments with their various sub-divisions, in order to concentrate authority and bring about the best possible results in the conduct of the schools, with the most advantageous expenditure of school funds.

Statistics show an expenditure of a half billion of dollars annually for the support of the schools in the United States, and they also show that there is, in the different states, a very uneven distribution of these expenditures per pupil of school age, due, of course, to the varied support of the public schools, ranging from \$3.00 to \$32.00 per pupil. However, each succeeding year shows increased financial support of the schools, and the states or communities that have been laggard in the general advance, will in time realize that money wisely expended on the education of the youth of our land assures big returns to the community making such investment.

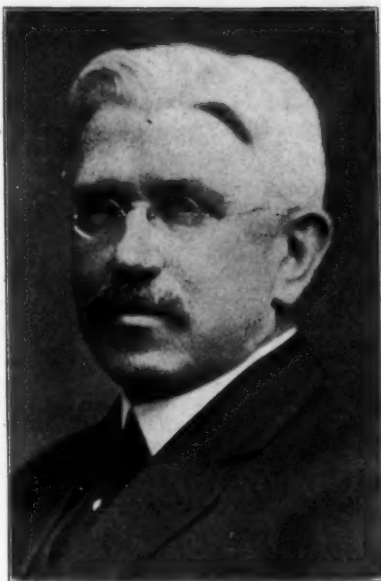
It is a recognized fact that the greatest prosperity, both intellectual and material, follows liberality in the support of the public schools, and this fact alone perhaps explains why, of all forms of public taxation, the school tax is the most popular, or perhaps, in more accurate phrase, the least objectionable. Dr. Nicholas Murray Butler has well said that "few things in American history are more impressive than the devotion of the American people to education, and their sincere belief in its efficacy as an agency of moral and intellectual regeneration."

Business Aspects Neglected.

Altho curricula, improved methods of instruction, schemes for the proper training and handling of special classes of children, etc., all form an essential part of school systems, yet without an adequate solution of the financial problems and due consideration of business propositions, but little could be accomplished. Sufficient provision for the physical side of the school system must, therefore, be made, if there is to be an effectual administration. The financial management of a school system consists no longer in merely recording the expenditures of money collected. It requires all the care and skill which are exercised in the conduct of a large corporation or a mercantile business, in gaining profit thru sagacious methods of production and prevention of waste.

Except in remote localities, the "little red school house," with its scanty equipment and scantily paid teacher, is fast becoming obsolete. Schoolhouses must be commodious, well-lighted, equipped with the most improved means of heating and ventilating, and made absolutely fireproof and safe from all possible danger from panic. Better paid teachers, larger playgrounds, gymnastic equipment, health inspection, moral and vocational training, nurses, special classes for crippled and defective children, dental clinics, school luncheons,—all these, and more, are required or demanded from school

NOTE—This paper formed the basis of an address before the Association of School-Board Accounting Officers, Memphis, May 20, 1914.



HON. WILLIAM DICK,
Philadelphia, Pa.

boards, and there seems to be no limit to what the school may be expected to do.

Since the people are willing to pay, as is shown in the great increase in expenditures for schools during the past fifty years, this humanizing and civilizing work must go on and the generations to come will be the beneficiaries. The task then before us is that of conducting the educational and business interests of the school system so as to produce the most desirable results in the most efficient manner.

United States Commissioner Claxton, in his annual report for 1911, tells us that Cleveland, Indianapolis, Boston, Cincinnati, Louisville, Chicago and Minneapolis, in the order named, have taken up the question of a business manager or business director, whose duties on the material side are co-ordinated with those of the superintendent on the educational side, and the results obtained have been satisfactory.

To accomplish the desired results, the business official should have clearly defined responsibilities, with sufficient power to enforce directions.

Concentration of School Management.

It must be admitted that the more concentration of authority there is in management, the less is the liability of friction with its attendant delays and waste. It would seem that the best results in school administration could be attained by having two chief executives,—a superintendent of schools and business manager or director, fiscal agent, or superintendent of finance.

The former official would be the recognized pedagogical head of the school system, authorized to make recommendations to the governing body for the right conduct of the schools, and to see that its rules and regulations are fully observed; to inaugurate methods of instruction and to hold the teachers to an observance of them; to correct evils, with full disciplinary powers; in short, to plan a campaign of education and to carry it out to a successful conclusion.

Business Management.

The business manager should, in like manner, recommend to his board all policies and plans pertaining to the financial and physical needs of the school system, and should be fully empowered to execute those adopted. His duties should include, (1) the preparation of the budget estimates of receipts and disbursements; (2)

the collection of revenues and the control and analysis of expenditures; (3) the construction, repair and operation of buildings; (4) the purchase of real estate and supplies, and (5) the general secretarial and clerical work of the board.

The acquisition of real estate alone is a matter often conducted with difficulty by committees of a board, by reason of the publicity given to their deliberations. If the selection of sites and their purchase were left to the executive officer of the board, options on desired sites could be obtained, and the prices to be paid definitely and quietly determined before submission to the school board for its approval.

It should be the duty of the business manager to see that the total school revenue is promptly collected from its various sources. Local taxation in most communities produces the greater part of the school revenue, but there are other available moneys for school purposes, such as state appropriations, miscellaneous receipts, endowments, etc. Then in some states a considerable part of the school fund is derived from the sale of public lands, which some state governments had the foresight to set apart for school purpose, thus creating a substantial yearly income.

At times bonds are to be issued for permanent improvements, involving transactions of a purely business nature. All these, and many other functions of like character, should be committed to the control and direction of the business manager; subject, of course, to regulation and sanction by the school board. He should be the executive head. Just as the superintendent of schools has his assistants, directors of special branches, chiefs of bureaus, etc., the business manager should have his superintendents or directors of building construction, supplies and equipment, or purchasing agent, legal advisor, etc.,—all of whom would be subordinate to the executive officer.

With such concentration of authority, with the school board as arbiters, in case of controversy between the two executives, friction should be reduced to a minimum.

Standardizing of Accounts and Records.

Such organization of power would also hasten the consummation of that in which the Association of School Accounting Officers is especially interested,—the standardization of school accounts and records.

There are some school people today who object to applying what they term the measurement plan in determining results in school systems. They argue that too much attention is given to the preparation of statistical information, which is of no benefit to the schools. They claim that each child has an individuality of his own, requiring specific, personal attention, and all attempts to classify and record results have a tendency to bring about a machine-like condition not at all desirable in school management.

Altho it is true that there are physical, temperamental and other conditions of child life that must be taken into consideration in calculating results, yet so long as the work in which we are engaged is paid for out of the public funds, there must be an intelligent accounting, not only of the dollars expended, but of the time and energy of the pupil, that will show the results obtained educationally as well as financially in the several schools, classes or groups. It is a proved fact that wherever units of measurement have been adopted, the general

(Concluded on Page 70)

DR. WM. RULLKOETTER, TEACHER

S. J. Vaughn, DeKalb, Ill.

The following beautiful characterization of a teacher was written by Dr. John W. Cook, himself a master teacher:

To be forever open-eyed before the wonder of the world;
To feel beneath its shifting light and shade the passionless and sincere energy of universal law forever working toward Divine events;
To keep forever a serene and perfect balance of the soul within the vastness of the universe thru an abiding consciousness of a substantial and eternal Personality;
To learn the truth which sums in brief the fine philosophy of all the soul's supreme attainments—that he who would find Life must freely lose it in his service to his fellow man;
To answer, "Here," to all the roll calls when the Truth is seeking those who "Stand By" her in simple and instinctive loyalty;
To see within the compass of a little child, however humble in its birth or station, all possibilities of men and angels—
This it means to be a craftsman in the loving guild of teachers.

Add to this a strong German brogue and two hundred pounds and six feet of magnificent physique, and you have the picture which the life of Dr. William Rullkoetter has left with the thousands of students and friends who have come under his wonderful influence.

Only a short time ago, a Chicago newspaper gave a list of heroes of the gridiron who have made the University of Chicago famous in football. Among the earlier heroes who began to make the University of Chicago a contender for large honors was mentioned "William Rullkoetter, '93, Professor of History, Drury College, Springfield, Missouri."

With what pangs, therefore, did the news come to the multitude of former students and friends that, under the strain of his arduous duties and vigorous life, Dr. Rullkoetter's health had broken.

The fact that the collapse came in the high prime of his great power and rich scholarship, has made those who knew him intimately, realize more keenly than ever before what a rare opportunity it is to sit at the feet of a great teacher whose great soul flows out, encompassing every condition of human life and grappling with every problem that has to do with its welfare.

Dr. Rullkoetter (Dr. Billy, as he is affectionately called) in a remarkable way took hold upon those whom he instructed, and influenced their lives mightily. His great motives were contagious and his fine philosophy of life became the dominant note in the lives of his students. A prominent business man said a short time ago, "I had the good fortune to have some great teachers in college and university, but somehow, what Dr. Billy said stays with me. He gave me a method of thinking. He enabled me to see myself in vital and significant relationships which, while they seem to remove the emphasis from the individual, they nevertheless by the very fact of socializing him, make him vastly more important. I find myself thinking his thoughts and gauging my theories and my conduct by his philosophy."

Dr. Rullkoetter was born June 26, 1864, in Oberbauerschaft, Kreis Lubecke, Westfalen, Germany. Of this he says: "The first fortunate event of my life was my birth; fortunate because it happened on

Sunday—and Sunday children are children of fortune. Most fortunate are those born during divine service in the morning from ten to twelve, for they can have visions and foretell the future. I have had visions, but the future has always remained a matter of faith and hope, all because I was born somewhere in the afternoon of that long summer day."

The father and mother were of the peasant laboring class, hence the son could hardly have hoped to go beyond the village school, which he completed with such brilliancy that he was urged to continue his education. "Refusing to be educated by charity," as he puts it, he went to work as a day laborer.

At the age of 18, young Rullkoetter came to this country and began work as a farm laborer. After working five years in Ohio and Nebraska at from \$12 to \$18 per month and saving \$900, he decided to enter the freshman year of the Academy of Hastings, Nebraska, College. Of this he says: "Since I had not been inside of a schoolhouse for eight years and never inside of an English school, it was a struggle in the dark; but gradually there came intermittent rays of light and finally day-break."

At the age of 27, therefore, he completed the Academy and entered Hastings College, where he remained to the completion of the Junior year, taking high rank in all of his work. Entering the University of Chicago, he graduated in 1893. His thesis on "The Position of Woman Among the Early Germans" was published and became an authoritative work on this interesting phase of German history. Having received a Fellowship in History, he did post-graduate work for two years, and in the fall of 1895 was called to the chair of History in Drury College, which position he has held continuously until the failure of his health. By work during summer quarters, Mr. Rullkoetter received the reward of his ambition, the

degree of Doctor of Philosophy, in 1899. He was married the same year.

While at the University of Chicago, Dr. Rullkoetter was an earnest student and an ardent admirer of the great historian, Von Holst. Following his own inclinations and under this inspiration, his mind naturally turned to the great social, political, and moral problems of the day in the light which an exhaustive knowledge of history and economics throw upon them. In his capacity as one of the leaders of thought in municipal affairs, he was persistent and unyielding in his opposition to petty politics and corporate greed.

Many years ago, I heard him say repeatedly, "The next quarter of a century must face and solve the problem of industrialism. The forces of education and society must take cognizance of the conditions, problems, and hideous wrongs which the growth of monopolized industry has forced upon the helpless and dependent. It will probably be settled by those forces bringing about an orderly, readjusting evolution; if not in this manner, then by a blood-letting revolution."

Dr. Rullkoetter was the first man I ever heard use the term "social consciousness." His was the first influence on me personally, looking toward education for the efficiency, freedom, and happiness of those who must toil with their hands. His words rang in our ears, "It must come, and it is the business of the men and women of the next quarter of a century to bring it about." In the light of what has taken place along these lines in recent years, these words seem almost prophetic.

In the matter of social consciousness, he has lived and still lives far in advance of his day. His life every day exemplifies his fine philosophy of broad and kindly service and the "fatherhood of God and the brotherhood of man."

While this remarkable man has been connected with Drury College, he has been offered more lucrative positions, always declining them in the love for the College and in the belief that in this field he could give his best service. And thus while he, as many other school men have done, has in very truth given his life for others in the spirit and high purpose of the Man of Gallilee, his services have not been sufficiently recompensed to render him independent of the misfortune which has come. And now, while confined to his room and for the most part to his bed, he has dictated a Mediaeval History, a New Interpretation of Wilhelm Tell, a Treatise on Faust, and Impressions from Heine, all of which are soon to be published.

This is but one of many instances among college, university, and other school men, of a man's great, whole-souled devotion to the welfare of others to the neglect of his own welfare. Many are the men and women in the educational field who have sacrificed position and preferment, and have given their lives that others might have richer and more abundant life.

The time will come when society will make ample provision for those rare souls filled with the spirit of the vicarious sacrifice; and larger and more timely and more just recognition will be given to their great work as it manifests itself in the lives and conduct of those whom they have served.



DR. WILLIAM RULLKOETTER.

The Memphis Convention of Secretaries

Melvin Rice, Assistant Secretary, School Board, Memphis, Tenn.

The National Association of School Accounting Officers held its third annual convention in Memphis, Tennessee, May 19, 20 and 21, 1914. The meeting was of great interest to all officials connected with the administration of school affairs, and was well attended. Secretaries of boards of education were present, as follows: Charles P. Mason, St. Louis; William Dick, Philadelphia; George W. Gerwig, Pittsburgh; P. D. Cooney, Syracuse; Melvin Rice, Memphis; Edward C. Baldwin, Boston (State Board); H. B. Rose, Providence; A. L. Clinite, Des Moines; J. S. Mullan, Rochester; H. B. Manly, Louisville; C. P. Walford, Richmond; W. H. Davis, Muskogee; W. J. Flynn, Erie; Fred G. Ege, Jersey City.

In addition to these were: D. L. Ross, Secretary and Purchasing Agent, University of Mississippi, Oxford; Henry R. M. Cook, Auditor, New York City Board of Education; August Hiller, Chief Statistician, Board of Education, Pittsburgh; William T. Keough, Business Agent, Boston School Committee, and Lorin C. Powers, Jr., Statistician, Philadelphia Board of Education.

The delegates were welcomed to the city in a speech delivered by J. P. Norfleet, President of the Memphis Board of Education, which was responded to by George W. Gerwig, of Pittsburgh, who spoke in extolling terms about the Sunny South.

No sooner had the advance guards of the convention reached the city than they were taken in charge by the Chickasaw Guards Club and were loyally received and entertained by its officers and members. The Tennessee Club also extended its courtesies, and automobile rides to the Country Club were features of the hours between sessions.

Prominent among the speakers was Dr. P. P. Claxton, United States Commissioner of Education. Dr. Claxton took for his subject, "School Accounting From the Standpoint of the Needs of the Bureau of Education." His remarks were centered upon the great responsibility which rests upon boards of school control for the economical and scientific expenditure of public funds in the administration of public schools. He explained the requirements and methods of the bureau of education with reference to the compilation of statistics and the comparison of costs of the various school activities thruout the United States on a uniform and standardized basis. "The Bureau of Education," said Dr. Claxton, "must depend largely upon this Association for its information; without its co-operation, the bureau would be helpless."

August Hiller, Chief Statistician of Pittsburgh, read an able paper on the subject of "School Accounting and Costs."

On the morning of May 20, Henry R. M. Cook of New York, President of the Association, delivered an address on the subject of teachers' pension systems, budget segregation and cost data under his general assignment on the program entitled "Some School Affairs." Mr. Cook's discussion of the subject of teachers' pensions was characterized by his well known powers of fundamental analysis, and in it was struck a keynote for the solution of a most perplexing problem of school administration. School officials in every large system have this problem to deal with, and while a system for the retirement of the superannuated may never be devised to meet perfectly all conditions, there can be no doubt that President Cook has presented the most favorable argument for a satisfactory plan to be adopted uniformly thruout the United States so far offered; in fact, no serious discussions of nation wide interest have thus far been had upon the subject. Mr. Cook's address appears in another place in this paper.

Papers were next read on the "Phases of School Administration" by Messrs. William Dick, Philadelphia; William T. Keough, Boston; George W. Gerwig, Pittsburgh. Lewis E.

Larson, Secretary of the Chicago Board of Education, was, thru a pressure of school business at home, unable to attend.

The phase selected for discussion by Mr. Dick, of Philadelphia, was "Concentration of Business Functions in Public School Administration."

William T. Keough, Business Agent of the Boston School Committee, discussed "Overhead Costs."

One of the most interesting and instructive discussions was by George W. Gerwig, Secretary of the Pittsburgh Schools, on the subject of "Standard Units of School Measurements."

The final address of the meeting was made by Charles P. Mason, Secretary-Treasurer of the board of education of St. Louis on the subject, "Preparation of the Budget." This was one of the subjects that contained nourishing meat for school administrators. The speaker first discussed the budget itself, what it is, what it is for, and who uses it. An exposition of the budgets of the states and municipalities as well as boards of education was made, showing comparison of methods and procedure between American and European Municipalities, with reference to the "passing and administering of the Budget."

On Wednesday evening, May 20, 1914, the Association rested from its labors and bethought itself of other things—chiefly among which was the expiation of its mundane transgressions upon the shrine of Bacchus, which had, in consideration of the requirements of the occasion,

been stationed in the magnificent dining room of the Chickasaw Guards Club. By eight o'clock an appropriate hecatomb had been brought together from the neighboring hillsides and promptly were the suppliants made ready to offer up a suitable sacrifice to the aforesaid deathless god.

On the following morning, resolutions of thanks were introduced for the courtesies and hospitality the visitors had received at the hands of the Memphis people and its institutions.

P. D. Cooney, of Syracuse, N. Y., invited the association to hold its next meeting in Syracuse. His motion was lost. Mr. Cooney then requested that inasmuch as he could not get the next meeting, he would like to get its co-operation in "removing school boards from politics and separating the schools from the domination of municipal authorities."

Officers for the year 1915 were elected as follows: Henry R. M. Cook, Auditor, New York City Schools, President; Charles P. Mason, Secretary Board of Education, St. Louis, Vice-president; William Dick, Secretary, Board of Education, Philadelphia, Secretary.

William Dick was also made chairman of a committee on membership appointed by President Cook.

The matter of selecting a place and time for holding the next meeting of the Association was, upon vote, left with the Executive Committee, with power to act. It is generally believed that the committee will select the City of Chicago for the next meeting place.

The Value of Conventions

Paul Kreuzpointner, Altoona, Pa.

In a previous article upon "The Value of Conventions" the writer pointed out the benefits to be derived by superintendents, teachers and communities from the attendance at conventions which bring the educational forces of the country together, having them rub against each other, exchange opinions and experiences, find out how large the world is and find out what an infinitesimally small part the single individual is playing after all in this busy beehive of human society and social-economic activity.

But while it is true that modern conditions of life demand that the workers in a given field of human activity come together to exchange ideas in the interest of self-improvement and community welfare, it would be a mistake to assume that, because conventions are a good thing their indiscriminate multiplication or attendance proportionately increases their benefits to the educators, teachers and communities.

Too much of any good thing is harmful when it exceeds our ability to digest the dose. Conventions may be so multiplied by merely adding to the number of meetings and by changing the name of the object that the effects become so diluted thru overlapping and repetition of subject matter as to leave only a shallow, hazy impression upon the enthusiast who deceives himself into the belief of having acquired serviceable knowledge.

This multifarious attendance at conventions where the same subject is always discussed, only the personalities changing, produces a mental surfeit similar to that which the early metallurgists experienced when trying to improve metals by the addition of other metals.

Thus, when it was found that aluminum would improve the quality of steel or bronze, metallurgists jumped to the conclusion that the more they dosed the steel with aluminum the better would be the quality of the resulting steel. So one per cent of aluminum was added to the steel and the result was to fill the steel with what is technically called oxide, spoiling the metal. Subsequently, it was found that the addition of one-tenth of one per cent of alum-

inum was beneficial, while one per cent clogged the pores of the steel.

The multiplication of educational conventions, meetings and conferences of one kind or another is an encouraging and praiseworthy sign of a healthy activity among the schoolmen, indicating a commendable desire to readjust our traditional educational system to new conditions of life and social-economic conditions, yet the lack of new ideas at most of these purely local meetings and the inability to do more than "to talk things over," produces little more than a mental surfeit with those who come from a distance at the taxpayers' expense.

The writer has attended some such local meetings and at neither one was anything discussed which had not been brought up at a state or national meeting.

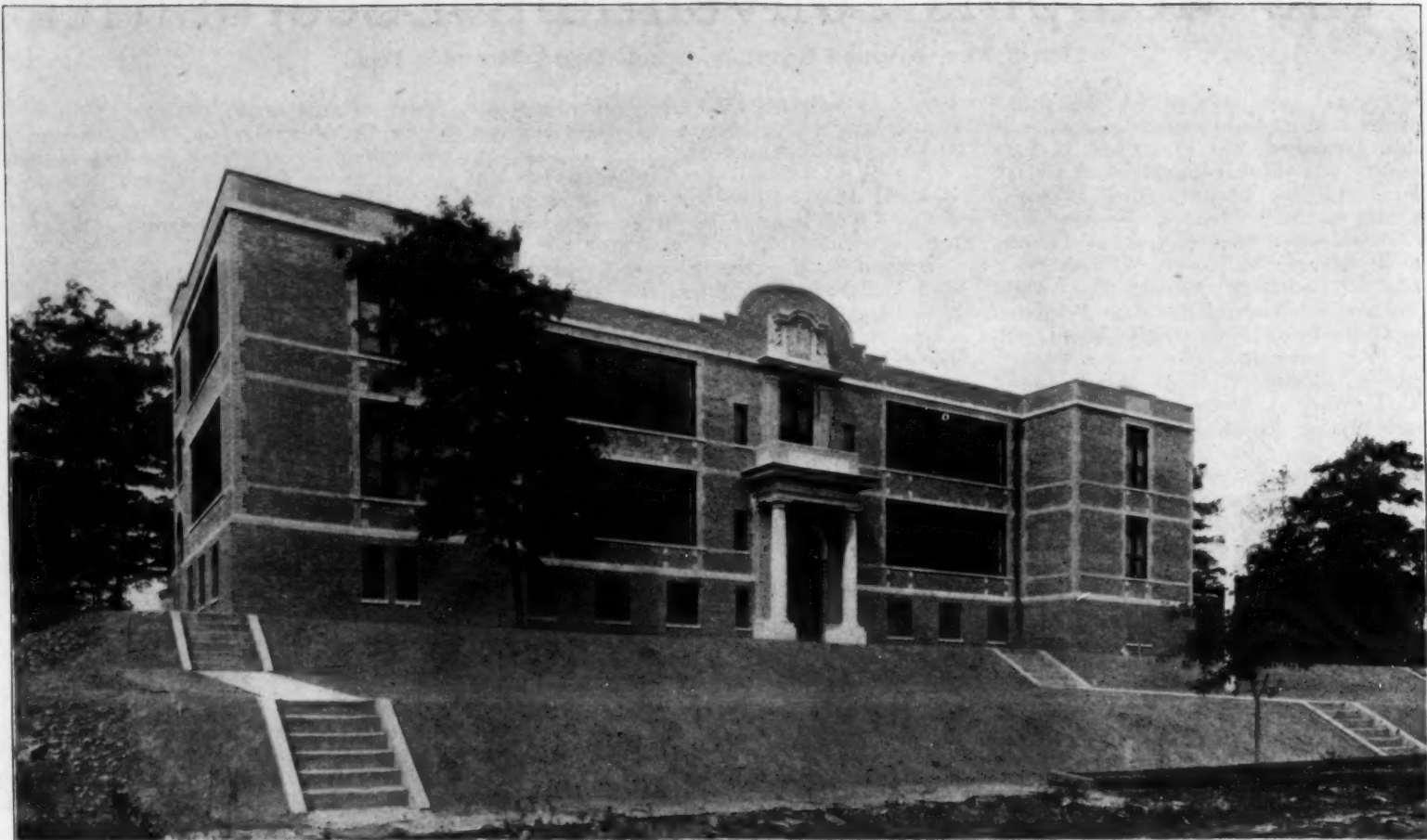
While social and economic changes have taken place rapidly enough in this country, they have not taken place, nor do they take place so rapidly as to make necessary the repeated discussion and deliberation of educational subjects and policies before they have been tried and somewhat digested. The International Society for the Testing of Materials which, in its sphere of promoting metallurgical and engineering progress, is of as great importance as any educational association in any country, meets only every three years, because of the desire to let the problems, with which the association has to deal, ripen before deliberation. Meanwhile the national engineering societies meet once a year and purely local societies meet once a month with rarely an outside member being present. Why?

First; because local societies merely talk over points brought forth at the annual meeting, tho perhaps under a different form; and, second, because those from a distance would have to come at their own expense, not being able to fall back upon the dear taxpayer for an outing.

In other words, these engineering conventions are treated as a business for business ends, altho the social side is not neglected.

And where an engineer or other technical man is sent to a convention at his company's ex-

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NEW ELEMENTARY SCHOOL No. 5, BELLEVILLE, N. J.
Charles Granville Jones, Architect, New York, N. Y.

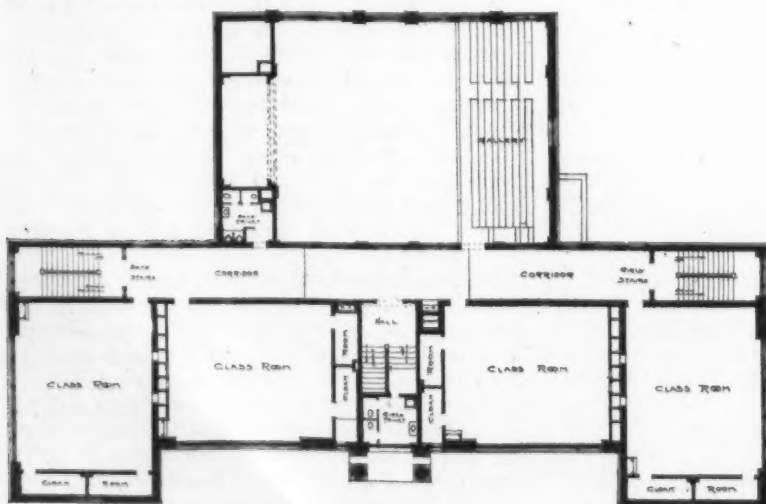
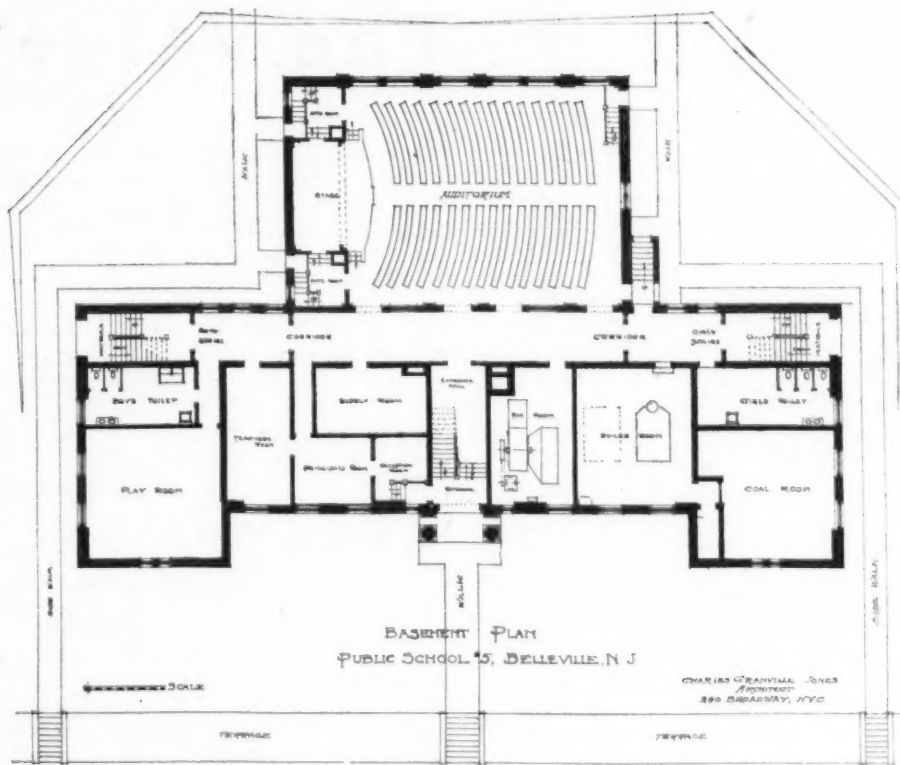
A VILLAGE GRADE SCHOOL.

To the architect and school board member who realize the difficulty of stretching a limited appropriation to cover the ordinary needs of a modern school organization, the new School No. 5, erected in 1913 at Belleville, N. J., is an interesting study.

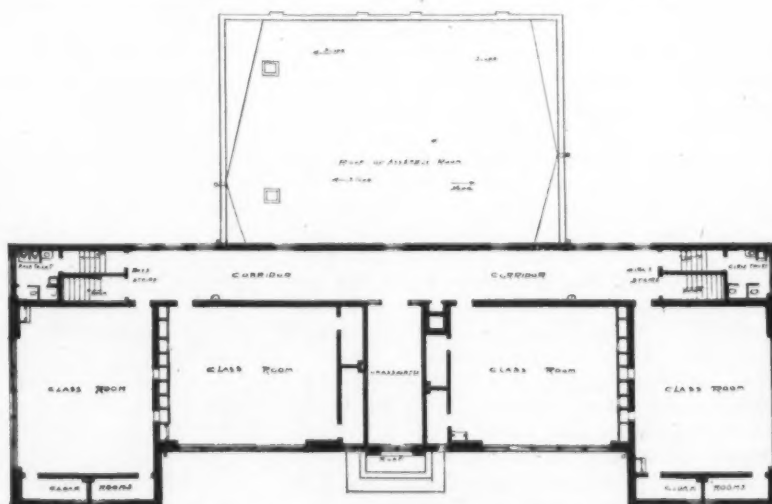
The building faces the east and is set on a high piece of ground 70 feet back from the street. It measures 138 feet, 8 inches front, is 47 feet, 6 inches deep, and has a rear extension consisting of an auditorium about 62 feet by 41 feet in size.

The main entrance of the building is in the center of the front, between the basement and first-story floor levels and connects with the main corridor which runs north and south from end to end of the building. The girls' staircase and entrance are at the north end and the boys' staircase and entrance at the south end of the same.

The basement, which is nine feet high in the clear, contains the principal's office, a teachers' room, a playroom, toilets, fuel, boiler and fan rooms, a store room and the auditorium. The last measures 40 feet by 50 feet and has a stage 15 feet by 20 feet in addition. It seats 300 people and will accommodate 150 additional in the



FIRST FLOOR PLAN, BELLEVILLE SCHOOL.



SECOND FLOOR PLAN, BELLEVILLE SCHOOL.



JOSEPH SEARS SCHOOL, KENILWORTH, ILL.
George W. Maher, Architect, Chicago, Ill.

gallery. The proscenium arch is sixteen feet high and twenty feet wide. The anterooms are arranged so that in emergencies they may be used as additional exits.

The first story contains the auditorium gallery, 16 feet by 40 feet, and four classrooms, each 24 feet by 30 feet, with cloak rooms connected, 5 feet by 24 feet, and boys' and girls' toilets. The second floor also contains four standard classrooms.

The entire building is of fireproof construction thruout, reinforced concrete being used for floors and gypsum block and terra cotta for partitions. The stairs are entirely fireproof and are constructed of iron with slate treads and platforms, and enclosed in brick walls. The finished floors of all halls and toilet rooms are of magnesia composition laid over cement. The boiler, fan and coal room floors are of cement finish. The balance of the building is floored with maple.

All classrooms, etc., are provided with bookcases. The classroom sashes have metal weather strips and three walls of each room have green Hyloplate blackboards three feet high. The trim thruout is of chestnut. The doors are sanitary, being flush and without panels.

The building is heated by steam, the air being drawn thru steam coils and then forced by fans thru warm-air flues to the various parts. From each room a vent flue connects which exhausts above the roof of the building. The various flues, etc., are controlled by automatic dampers, operated by thermostats. Direct radiation is used in various auxiliary rooms, arranged to be cut off automatically when the temperature rises to 70 degrees Fahrenheit or over.

The plumbing thruout is of the most sanitary type. Two bubbling drinking fountains are provided in each hall and two slop sinks have been placed in the basement and on the first and second floors.

The building is wired in iron conduits for electric lighting and has been piped and fitted with gas fixtures for emergencies. In the prin-

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THE JOSEPH SEARS SCHOOL BUILDING AT KENILWORTH, ILL.

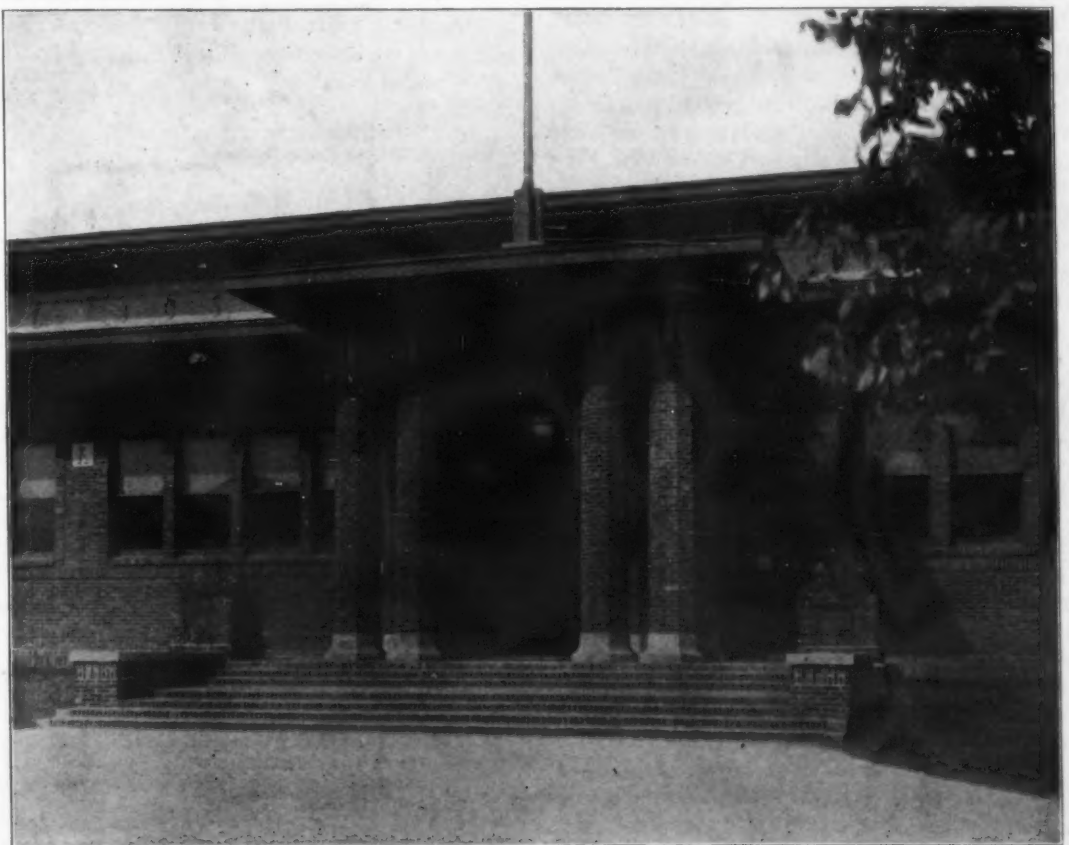
The Joseph Sears School building erected at Kenilworth, Ill., is a modern expression of school architecture. It is American in design and shows the possibilities of school construction in this direction. Such buildings should not only be practical in every way, but artistic and the Kenilworth School emphasizes this fact in its design.

The plan is simple and direct; the classrooms are arranged to be on the south side of the building for warmth and pleasing effect. The

utilitarian features of the plan are on the north side.

The public hall is wide and directly accessible to all rooms, entrances and exits. The assembly hall, due to its central location and close proximity to the public hall, can be enlarged when so desired, taking in the public hall space, by simply opening the large sliding doors between the two.

The Kindergarten is one of the main features of the plan, having its own entrance with fewer steps up to the floor level than the main building, also its own toilet and dressing rooms, etc.,



MAIN ENTRANCE, JOSEPH SEARS SCHOOL, KENILWORTH, ILL.

especially designed for the little ones. The exterior treatment of the Kindergarten also is special in order to make it distinct.

The practical features of the plan consist of the lighting, also the heating and ventilating. The main lighting is by means of the saw-tooth skylight construction on the roof, arranged for north light. This north light is diffused over the entire area of the classrooms thru the ceiling sash. These ceiling sash conceal the saw-tooth construction above. This method of lighting prevents shadows or sun spots in any portion of the room; on the other hand all is equally and thoroughly lighted. The windows to the south are principally used for a view of the exterior.

The heating and ventilating is modern and mechanical. There are no direct radiators in the schoolrooms; the outside air is brought into the respective rooms heated and moistened automatically.

The interior of the building is designed in harmony with the exterior architecture. The desks and furniture are especially designed and made for this school. The wood finish is simple and of weathered oak and, together with the decorations, make of the interior a soft and harmonious effect of color.

The exterior is of texture brick. The saw-tooth skylights are concealed by a long low parapet above the main cornice line.

The dominant note in the design is expressive of simplicity and breadth of outline, with freedom of detail.

Mr. George W. Maher, Chicago, Ill., is the architect.

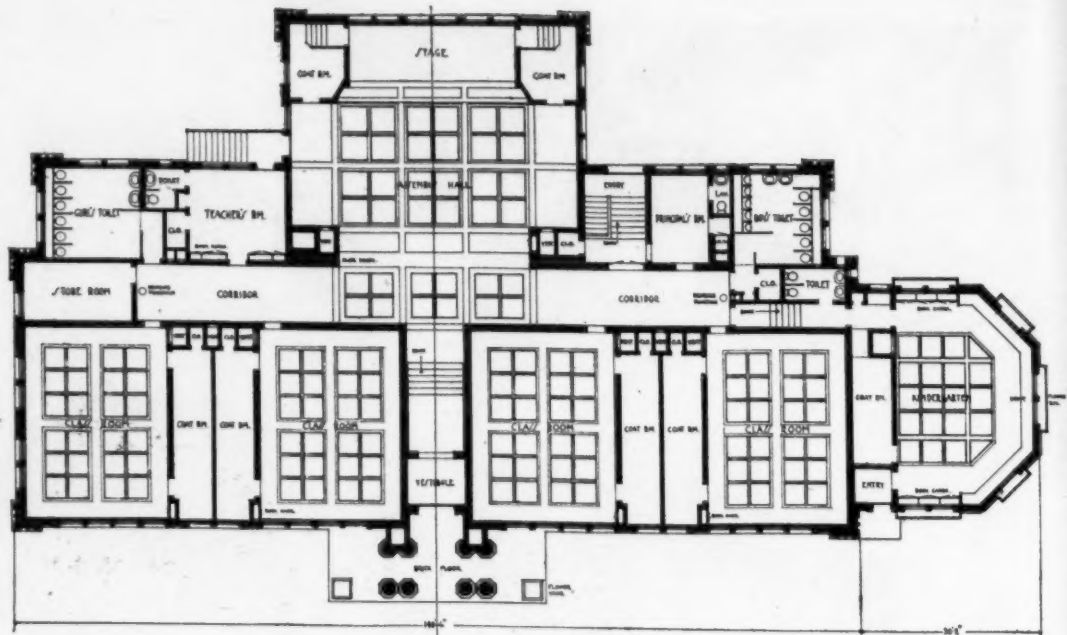
THE DONORA ELEMENTARY SCHOOL.

The architect who, today, plans and superintends the construction of a truly complete school building must be a master builder in the best sense of that term. Not only must he thoroughly understand and appreciate the structural problems involved in his project, but he must know much about the educational purposes to which the building is to be put. These have so changed and broadened in the past ten years that not only the ordinary branches of instruction must be provided against but more attention must be given to the use of buildings for industrial education, for evening schools and for social center uses. Finally, but not least, is the problem of increasing the size of the building to meet the possible growth of school population.

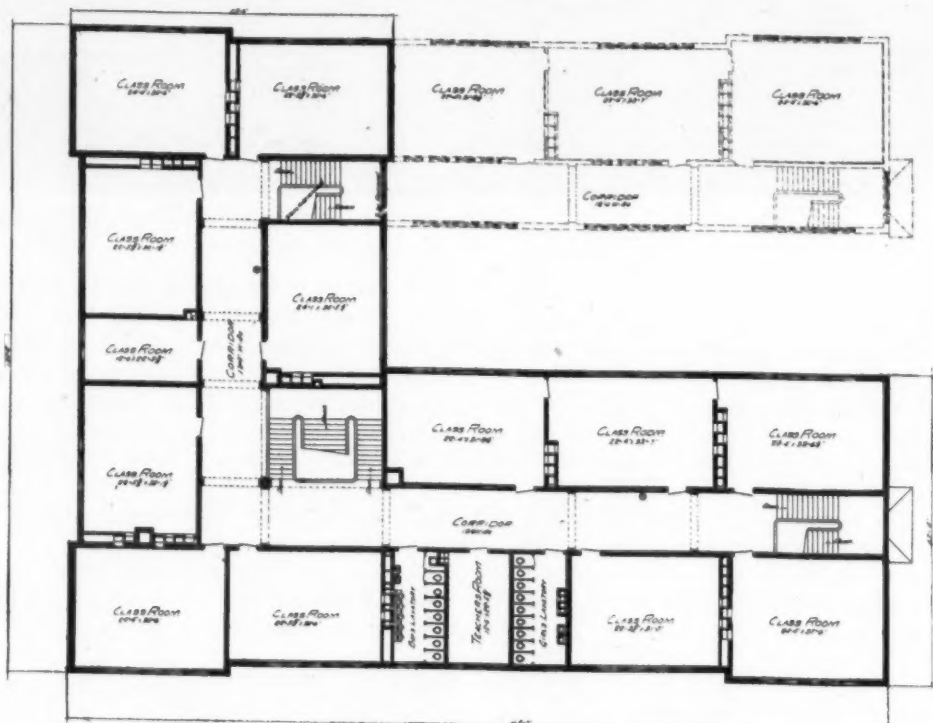
An elementary school in which practically every problem of school architecture has been involved and successfully met is the new First Street School at Donora, Pa. The contract for the building was let and ground was broken about the first of July, 1913, and the structure was ready for occupancy on the first of March, 1914.

The general plan of the building is in the form of the letter "L," so arranged that it may later assume the shape of the letter "U" when the proposed addition has been completed. The general plan is simple and direct; the corridors and stairways have been placed and arranged in relation to the classrooms and to the exits so as to make travel from room to room easy and to make exit from the building as rapid as possible. There are three entrances which lead directly from the streets or playgrounds and which will permit the entering or dismissal of pupils from the manual training rooms in the basement without interfering with, or entering any other part of the building. This has been especially provided for manual training classes which come to the building from surrounding schools and also for night classes in industrial subjects.

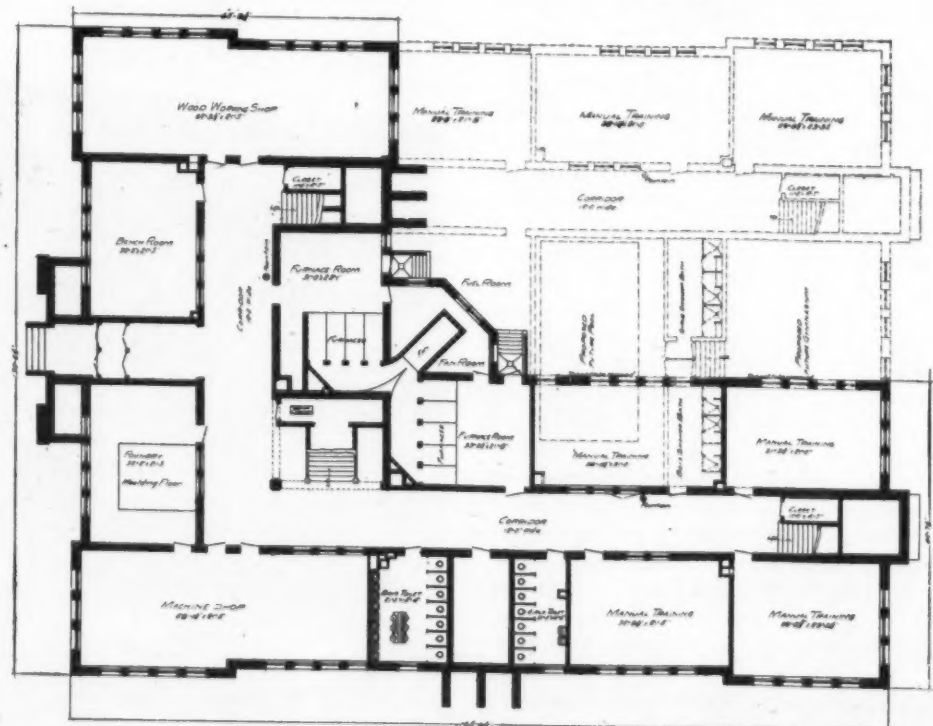
The basement contains ten rooms for manual training work, including a large woodworking



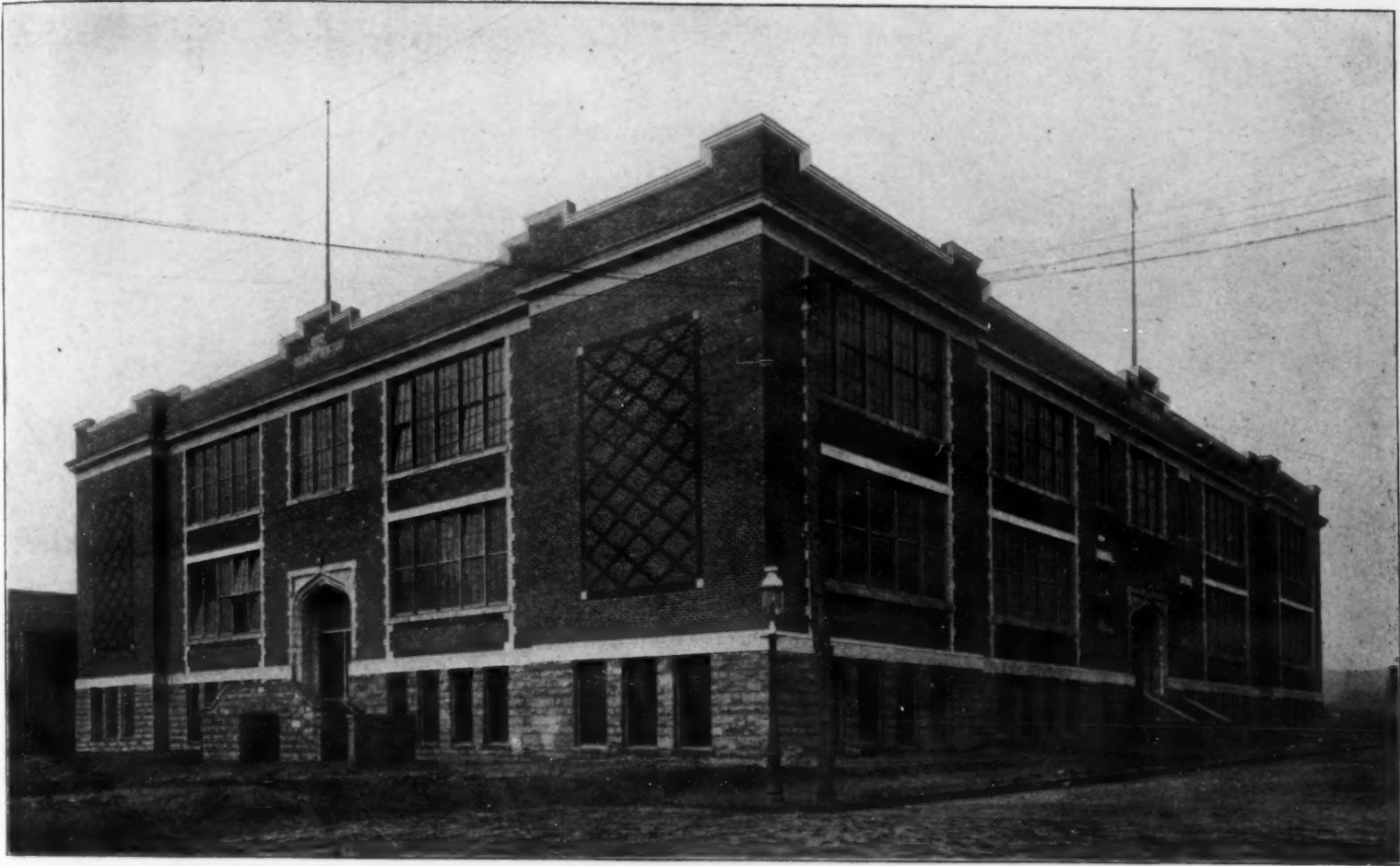
FLOOR PLAN KENILWORTH SCHOOL.



SECOND FLOOR PLAN, FIRST STREET SCHOOL, DONORA, PA.



BASEMENT PLAN, FIRST STREET SCHOOL, DONORA, PA.



FIRST STREET SCHOOL, DONORA, PA.
C. C. Compton, Architect, Donora, Pa.

shop, bench room, four elementary manual training shops, a large machine shop and a foundry. The facilities are large enough to concentrate all of the elementary, as well as the advanced manual training work offered in the Donora schools, in this one building. It is likely that later on cabinetmaking, carpentry, sheet metal working and other trades will be taught here.

The first floor contains eleven rooms, the principal's office and the supply room. The office is located in the center of the building, close to the main stairway, so that the principal may go to any part of the building with the least possible travel. The supply room has been placed directly in connection with the office so that the clerk in charge may handle all school materials and books and may keep close watch of all outgoing material.

The second floor is arranged very much like the first floor, containing twelve classrooms, a small recitation room and a retiring room for the teachers.

The classrooms are arranged to receive light from one side and the windows are separated by the narrowest possible iron mullions, eliminating all shadows and making the light absolutely uniform. The classrooms are so proportioned that the seats farthest away from the windows are not removed a greater distance than twice the measurement of the tops of the windows to the floor. The windows run within six inches of the ceiling.

Six corner rooms of the building accommodate 48 pupils each and the remaining classrooms accommodate 45 pupils each. The classrooms are finished as simply as possible with plastered walls and ceilings, a minimum of hardwood trim, maple floors and slate blackboards. The last mentioned have chalk trays covered with wire netting arranged in such a manner that the dust can be removed by the use of a vacuum cleaner.

Particular attention has been paid to the lighting of the corridors by the use of borrowed light. The inside walls of all the classrooms have

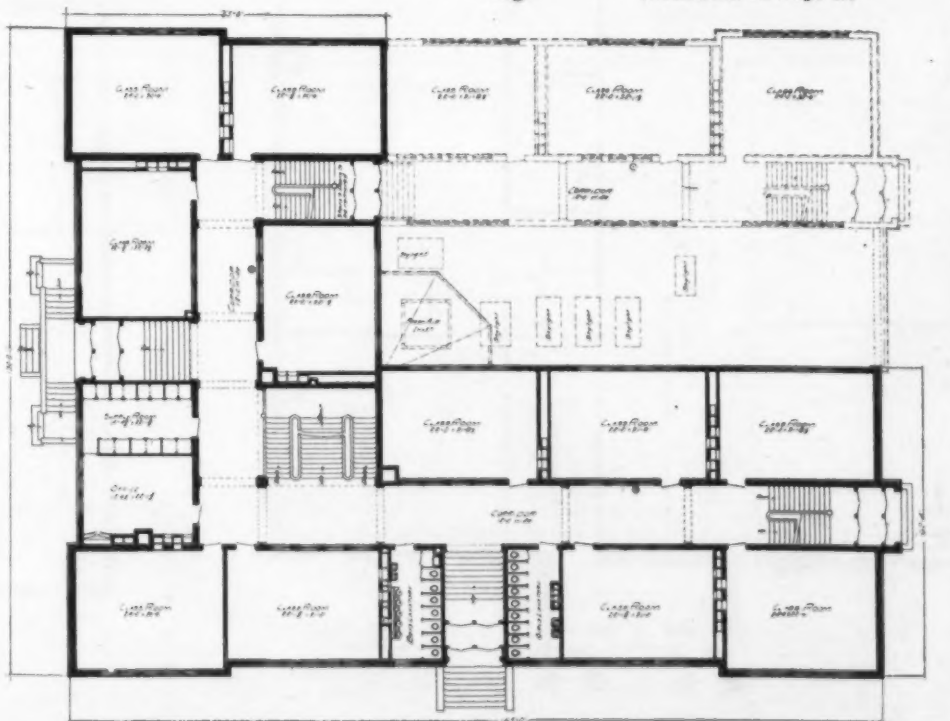
windows set high in the walls so that the corridors are lighted continuously thruout their length. The arrangement also permits of natural ventilation in warm weather and makes it possible to turn the entire building into a fresh-air school.

The building is semi-fireproof. The basement walls are of native stone and the outer walls are of brick trimmed with stone; the interior bearing walls are of brick and the partitions between the classrooms are of terra cotta blocks. The corridors have reinforced concrete floors and ceilings and the stairs are of the same material. The furnace, fuel and fan rooms have also concrete ceilings, have the three entrances so that every possible safeguard against panic and fire has been provided. The floors in the class-

rooms are of wood construction and contain fire stops.

The arrangement of the stairways is unique. The central stairway is nine feet wide and the additional stairways at the end of each corridor are five feet wide and are all constructed of reinforced concrete with balustrades of the same material. The stairways are admirably located with the view of furnishing quick exit in case of trouble and are arranged so that pupils may be transferred from one floor to the other or from room to room with a minimum of corridor travel. The architect has given especial attention to this problem because the building is organized on the departmental plan, and the upper grades are required to pass from room to room according to the subjects which they are studying.

(Concluded on Page 69)



FIRST FLOOR PLAN, FIRST STREET SCHOOL, DONORA, PA.



PRESTON HALL, WAITSBURG, WASH.
Osterman & Siebert, Architects.

A COMMUNITY CENTER.

By "C. M."

The opportunity of the school to serve in preparing our future citizens for their duty of bread-winning, while appreciated, is not commonly realized in villages because of a lack of that prime essential of all educational effort—money. The same want is also at the bottom of the school's failure to serve more broadly as a civic and social center. The newer communities of the farther Central and of the extreme Western states, where the bare necessities of government require considerable sacrifices in the shape of taxes are especially unfortunate in their inability to broaden the scope of school facilities so that some time must elapse before

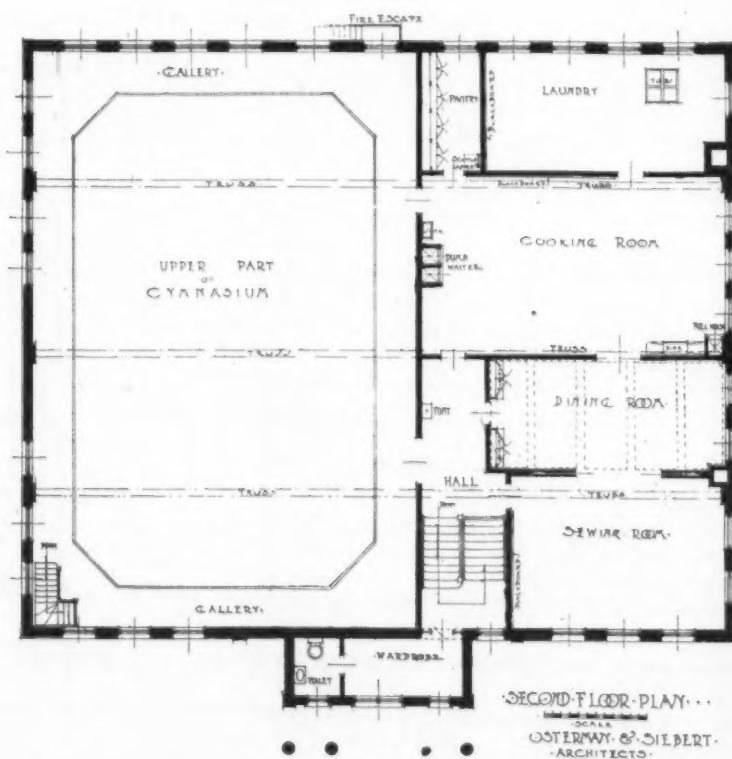
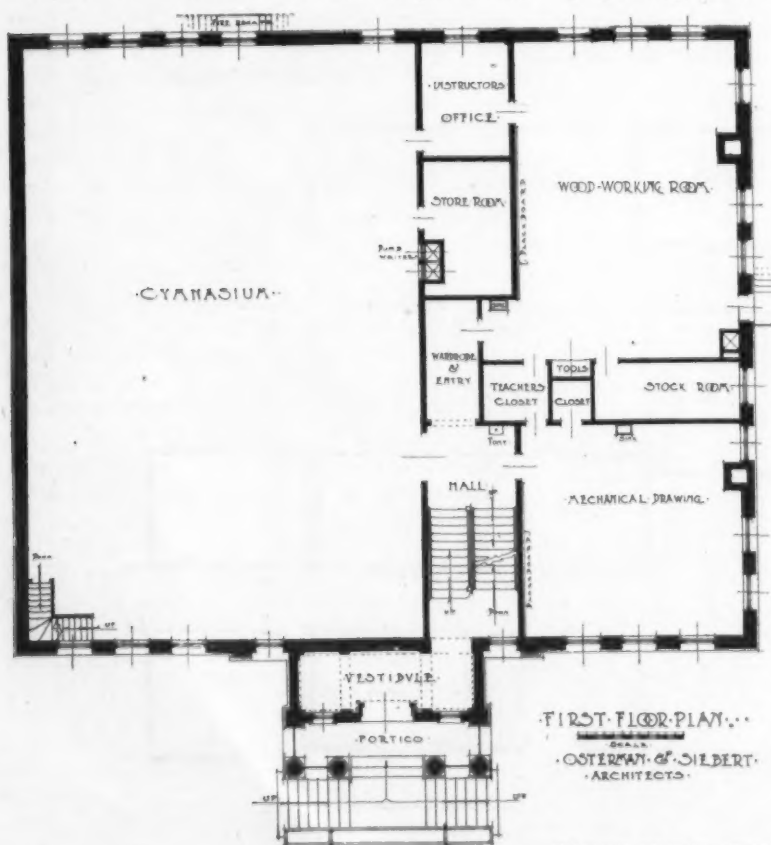
they will be free to meet their most pressing needs.

A community is indeed fortunate which includes in its citizenship a man so liberal as to make a public gift for its industrial education and social center needs. Waitsburg, Washington, a village of 1,500 inhabitants, is such a happy town and can boast a \$40,000 school building, the gift of its public-spirited citizen, William G. Preston.

Primarily the building is intended to house the vocational and physical education departments of the local high school; and, secondarily it is to be the recreational center for the school and for all of the citizens of the village. Roughly speaking, there are three departments in the

building. The first, the boys' manual training department, consists of a forge room on the ground floor, a woodworking room and a drafting room on the first floor. The forge room measures 24 by 25 feet and is equipped with down-draft blast forges and special ventilation to remove heat, smoke and gases. The woodworking room is 25 by 36 feet in size and has connecting with it an instructor's office, a stock room, a teacher's closet, etc.

The household arts department on the second floor comprises rooms for sewing, cooking and laundry purposes. The sewing room is equipped with cutting tables, fitting platforms and sewing machines. The cooking and dining rooms are furnished not only for teaching purposes,



FLOOR PLANS, PRESTON HALL, WAITSBURG, WASH.



POND END SCHOOL, WALTHAM, MASS.
Brainerd & Leeds, Architects, Boston, Mass.

but also for actual housekeeping practice. No provision is made for household chemistry because this is taught in the regular laboratories of the high school. The laundry has stationary tubs, ironing boards and electric irons.

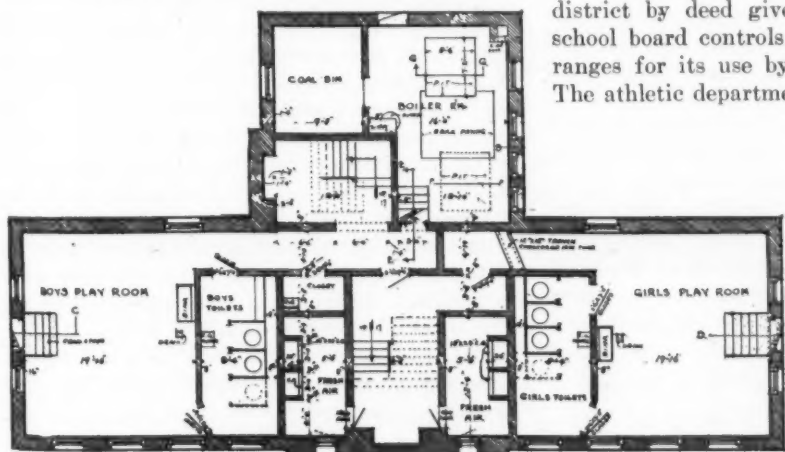
Besides these industrial features the building affords splendid facilities for physical education and for wholesome recreation. In the basement there are two regulation bowling al-

leys, a swimming pool, 18 by 30 feet, shower baths and dressing rooms. The last mentioned rooms serve also for the gymnasium on the first floor. This room is 45 by 58 feet in size and extends thru the two stories to the roof. It is fully fitted with modern apparatus and has a spectators' gallery that may be used for running.

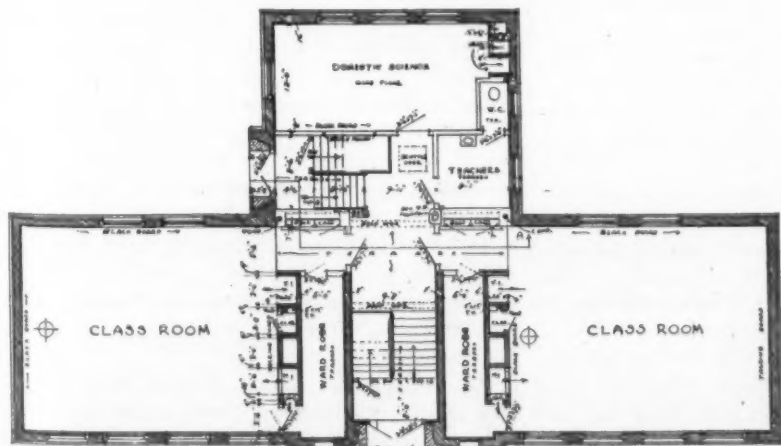
The building is the property of the school district by deed given by Mr. Preston. The school board controls and maintains it and arranges for its use by the community at large. The athletic department is open for gymnasium

classes, for bathing and bowling, basketball and other games. The domestic science rooms are open for club and committee meetings and accommodate small parties and gatherings. The gymnasium is fitted with a collapsible platform and folding chairs and is used for large meetings, school entertainments, etc. Dumb waiters have been built in so that large dinners may be served, using the cooking room above as a kitchen.

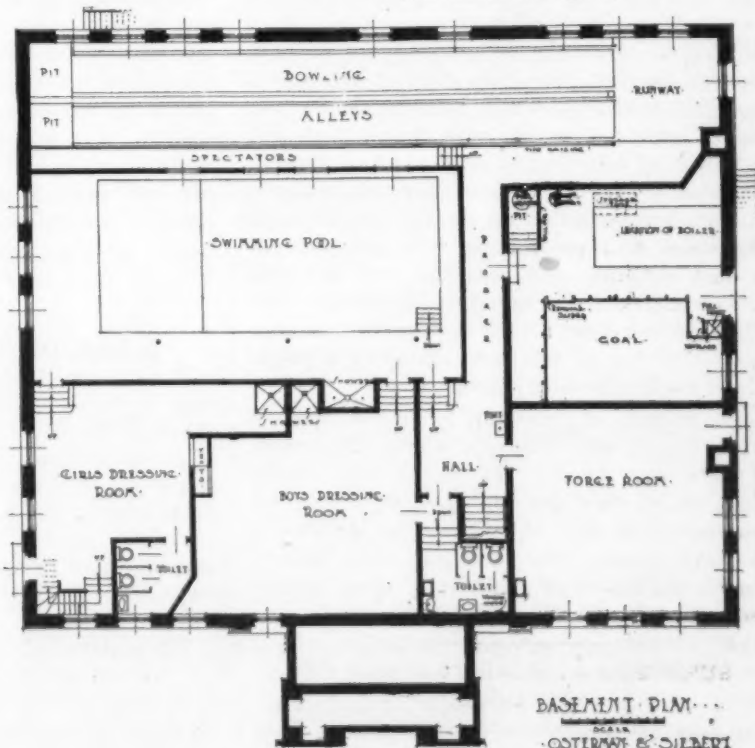
The exterior of the building is well suited for the commanding position which it occupies in the town. It is Colonial in style and has
(Concluded on Page 70)



BASEMENT PLAN, POND END SCHOOL.



FIRST FLOOR PLAN, POND END SCHOOL.



BASEMENT PLAN, PRESTON HALL, WAITSBURG, WASH.
(See plans and photograph on page opposite.)

THE AMERICAN School Board Journal

DEVOTED TO
Legislative and Executive School Officials
WILLIAM C. BRUCE, Editor

EDITORIAL

THE CLEVELAND MUDDLE.

Unwise administration appears to be at the bottom of the present acrid controversy between the board of education and the teachers' organization of the city of Cleveland. In a final attempt to win a deserved increase in salary the teachers have announced their intention to form a union, and have, in fact, allied themselves with the federation of labor. The board, following its antagonistic attitude, has again denied the request for higher wages and has declared that it will discharge all teachers who join the union. The first engagement in the legal battle has been won by the teachers but the board will carry the case to the Supreme court of the state. In the meanwhile, the teachers have left for their summer vacations with the uncertainty of finding their positions awaiting them in September and the board does not know how many defections there will be from its needed corps.

To the unprejudiced observer, the entire situation appears inexcusable—the result of unwise administration on the part of the board, an effect of misguided, radical leadership on the part of the teachers.

Just how much the board of education is to blame for its lack of funds for higher wages is uncertain. There appears, however to be much merit in the charge that the expenditures for buildings and repairs, and for salaries of administrative officers, are not made on so economical a basis as those for teachers' salaries. The attitude, moreover, of the board as a body, has been distinctly unfriendly toward the teachers and has shown no sign of the intention to do well by the teachers or to arouse their goodwill and confidence.

The wisdom of a teachers' association becoming a labor union is very doubtful, when the long continued agitation for the recognition of teaching as a profession, is considered. It is difficult to reconcile the professional preparation of teachers, the high code of ethics and dignified leadership which teaching bodies take in the state and nation with the methods and practices of labor organizations. And there is no intention here of besmirching the character of trade unions, which are an absolute necessity and which do a noble work. The point simply is that teaching and unionism will not mix successfully without injury to education. The Cleveland teachers do not appear to have been wise in trying to win their cause by a means which could have been passed by.

The citizens of Cleveland, as well as the press of the city, should demand a speedy adjustment of the present muddle. The school board should yield, or at least give satisfactory assurances that something will be done for the teachers in the near future. On their part, the teachers should hold to a high professional ideal in their associations and public and official activities.

BUSINESS ADMINISTRATION OF SCHOOLS.

A large portion of the space of this issue of the SCHOOL BOARD JOURNAL is devoted to the papers and addresses of the third convention of the School Board Accounting Officers' Association of the United States. Important and

interesting as these papers are, they treat of problems and emphasize tendencies that must make the thoughtful school-board member pause and consider.

The expert school-board accountant and the professional school business manager are two new developments of the movement for centralizing the administration of the schools. The offices logically evolve out of the movement for centralizing the school control by reducing the membership of school boards and limiting their activities to more purely legislative functions. Just as it has been recognized that laymen devoting a few hours weekly or even daily to the business of the schools, cannot attempt to make courses of study or supervise teaching, so it is becoming to be appreciated that they cannot devise systems of accounting, make budgets, manage the maintenance and repair of buildings or attend to the thousand-and-one physical details of the schools that require experience, intimate knowledge and constant watchfulness. The two positions of school accountant and school business manager must, we feel, develop into a distinct calling if the schools are to have the benefit of that administrative economy which large business corporations enjoy, and which the schools as one of the most important governmental branches, so much deserve.

Of the several distinct lines of progress which the convention recorded, the endeavor to fix units of cost for all of the various factors of administration will, perhaps, afford the widest use for the school authorities who are seeking means of comparing their own efficiency with the efficiency of other schools. In the past, the systems of accounting have differed so much in principle as well as detail that it has been impossible to compare even such universally used terms "per capita cost". In computing the cost of schoolhouses, of furnishing books, of heating, etc., similar differences in practice have existed to make deductions from any given group of cities or states inaccurate and unintelligible and consequently useless. Such statements of principles as that made by Mr. Gerwig of Pittsburgh deserve to be taken up officially by the United States Bureau of Education and by the several state school executives so that units of school cost may be defined and fixed from Maine to California.

Above all, however, the convention pointed out the need of a deeper study of the business aspects of school administration and of an exchange of experience between the business executives of the schools. Just as the educational officials have by conference and by a study of each other's problems and methods determined the best ways of organizing and of supervising schools, so the secretaries' offices of school boards must reach an understanding and seek a common expression of their labors.

SCHOOL SUPPLY BUYING.

It may seem trite to repeat, in these columns, that no business of school boards, during the summer months, is more important than that of purchasing needed furniture, apparatus and supplies. Still a visit to any one of the large school-supply houses in New York, Chicago or any other large center, late in August or early in September, would lead one to believe that few school officers really appreciate, if they understand at all, the necessity of "early buying".

Along this line, a recent open letter of Calvin N. Kendall, State School Commissioner of New Jersey, contains some wholesome advice. Addressing himself particularly to the school officers of his own state, Dr. Kendall says:

"The purpose of this letter is to urge you to purchase early the school supplies that will be needed in the schools under your jurisdiction

for the school year beginning next September. Better service, better prices and better selection will be had if purchasing is done early.

"School supplies include fuel, textbooks, seat work material for primary grades, manual training equipment, stationery, maps, crayons, etc., which the laws require school boards to furnish, and which are absolutely necessary if teachers are not to be hindered in their work with children. Some boards of education save money by purchasing supplies in quantity, and in this way often secure wholesale rates or prices.

"Not only is it advisable to purchase these supplies early, but it is necessary to see that they are in the schools before the opening in September. The ordering of supplies in the spring, or before the first of July, should insure their delivery at the schools before September first. Many school boards are already doing this, but other school boards postpone ordering until August, or even until September, with the result that orders sometimes are improperly or carelessly attended to, owing to the rush during the period immediately before the schools open. I regret to say that in some schools the supplies are not delivered until long after the schools are opened. Teachers in such schools, being without the tools for work, are disheartened, and the children suffer. No manufacturer would think for a moment of putting workmen in a factory without equipping the factory with tools and machinery. No farmer would hire a man to work on his farm and then neglect to supply him with tools with which to work.

"I also urge that necessary repairs to school buildings be taken up promptly at the beginning of the summer vacation. Every blackboard should be put in good condition for work. Every schoolhouse should be thoroly cleaned. Every outbuilding should be made wholesome and sanitary, as the law requires, and all school grounds should be put in good condition. If such repairs are attended to early in the vacation they are likely to be completed before school is opened, and the teacher, provided she has the requisite supplies, can begin to do good work from the very first hour of school.

"If these two matters, the providing of necessary supplies for the use of children, and the making of necessary repairs, could be attended to promptly in every school district in the state, the efficiency of New Jersey schools would be greatly increased. It costs no more to attend to these matters early; the chances are that it would cost less."

It may be added that the cost of school materials could be reduced by at least ten per cent if the buying season were spread over the year rather than restricted to six or eight weeks. The effect of such a saving may be better appreciated when it is understood that about \$35,000,000 are spent each year for furniture and supplies.

IS IT FAIR?

Reports come from a number of towns in the Middle West concerning the activities of supervisory officials of neighboring large cities in seeking experienced teachers. The gentlemen came during the spring months apparently to inspect the schools and in the course of their visits made known the fact that they were seeking a considerable number of experienced instructors to fill vacancies for the coming school year. In one community, positions were offered to practically every experienced teacher and the local superintendent was forced to face the possibility of losing more than half of his entire teaching corps.

The large cities of the country must always look to the small towns for a portion of their teachers and supervisory officials. They cannot hope to fill all vacancies by promotions from the

ranks or by the appointment of young men and young women from the colleges or the normal schools. They continually require fresh blood in responsible positions to make up for losses by death, retirement and marriage. They must go to the small towns for teachers.

On the other hand, it is but natural for the very efficient teacher in the small school system to seek the opportunities which the large city offers in the way of broader usefulness, better wages and promotions.

We cannot conceive of a code of professional ethics which permits an associate superintendent to rob a small school system of any considerable number of teachers. The practice is not compatible with our American principle of fair play. It is no easier for a superintendent to build up around himself a body of capable, loyal, well-trained teachers in a small town than in a large city. In fact, the small salaries, the number of applicants from which to pick and other natural limitations often prevent his having a select body of assistants. Wholesale pirating of teachers should be stopped and will be stopped when the results are understood.

MISS CROPSEY RETIRES.

Anyone who has followed the development of the Indianapolis school system must know something of the work and influence of that remarkable teacher, Miss Nebraska Cropsey, and must share in the regret that she has laid down her administrative burdens. Exceedingly few schoolmen can point to a career of more than fifty years in the schools of a single city as teacher, principal and supervisor. Few, indeed, of the men and women who entered the teaching profession in the early sixties have retained their force and vigor, their freshness and cheerful attitude toward life, their open-mindedness to accept and sympathize with the views and the methods of the present times. Miss Cropsey has done all this and has today more loyal, sympathetic and willing teachers under her direction in the lower grades of the Indianapolis schools than ever in her long career. It is fitting, indeed, that she should lay down her office while still in her full vigor to enjoy a rest so richly deserved.

NATIONAL AID FOR VOCATIONAL EDUCATION.

Congress is considering, at the present time, a bill formulated by the federal Commission on Vocational Education, for national aid to vocational, agricultural and household-arts instruction. A total maximum appropriation of seven millions of dollars is to be made annually, duplicating sums set aside by the individual states for the same purpose.

The report of the Commission is a rather complete statement of the economic and social necessities for vocational instruction, and of some of the leading principles which will control its development. Thus the Commission writes:

"The kind of vocational education most needed at the present is that which is designed to prepare workers for the more common occupations in which the great mass of our people find useful employment. Vocational training, to be most effective, should be restricted to persons more than 14 years of age who have laid the foundations of a general education in the elementary schools. Because of the kind of workers to be reached and the character of the instruction to be given, this vocational education should be of less than college grade.

"The states aided in part by the national government have already given substantial encouragement to and offered fairly adequate opportunities for training in the professions, in the arts and sciences, and for leadership in commercial and industrial activities. What we need now is practical education of secondary grade to reach the great body of our workers.

"The American people have hardly begun the work of providing for the practical education of



The First Bump.

— Westerman, Columbus Journal.

these millions of our productive workers. In this whole country there are fewer trade schools than are to be found in the little German kingdom of Bavaria with a population not much greater than that of New York City. There are more workers being trained at public expense in the city of Munich alone than in the larger cities of the United States, representing a population of 12,000,000.

"The greatest treasure which this country holds today is the undeveloped skill and vocational possibilities, not only of the millions of our workers everywhere, but of the great army of our school children.

"Vocational training is needed to provide a substitute for the old apprenticeship. Large scale production, extreme division of labor and the all conquering march of the machine have practically driven out the apprenticeship system thru which in a simpler age the young helpers were taught.

"Vocational training is needed to increase wage earning power and to meet the increasing demand for trained workers. With the constantly increasing demand upon our industries for more and better goods, the supply of trained workers is relatively diminishing.

"Vocational training is needed to offset the increased cost of living. With a farming area practically stationary; a rapidly increasing population, and an agricultural class whose ability with present methods to meet the demands for larger production relatively diminishing, our national appetite has outgrown both our national larder and our national pocketbook."

SCHOOL BUILDING SIZES.

"Too much is as bad as not enough" is an old saw which applies especially to schoolhouse design. Evidence of this truth is contained in the findings of the Russell Sage Foundation's experts, who recently conducted a survey of the Springfield, Ill., school system.

The newer schools of Springfield are 25 years behind the present ideas of school architecture, according to the report. They waste space in

that the classrooms are too large and too high; the corridors are too wide and the cloakrooms are too large. "In all three dimensions, length, width and height, the rooms are larger than is sanctioned by the best practice of modern school architecture. The light will not carry well across rooms so wide. An undue amount of fuel is required to keep them warm and an unreasonable amount of work to keep them clean. Their size renders it difficult for the children to hear and for the teacher to keep the children's interest. The children in the rear of the room have difficulty in seeing what is written on the front blackboards and finally, the size of the rooms offers constant temptation to increase the size of the classes to a point where efficient work is impossible."

It is impossible to deviate much from the generally accepted principles of the best school-house design or from the sizes which have been found most advantageous, without ruining the usefulness of buildings. Every cubic foot of space which is unnecessary, is a positive waste of public funds and this is not inconsiderable at the present time when 16 to 24 cents per cubic foot are not uncommon costs.

School boards may well demand of architects that they prove the cubage of their proposed buildings and justify every space-increasing feature which they suggest.

SHIRT SLEEVES AND DECORUM.

Shall boy students in the high schools be permitted to attend classes in their "shirt sleeves" or, shall the school authorities insist on coats out of respect to the women teachers and girl students? These petty questions have caused considerable unnecessary controversy during the closing weeks of the school year in a number of cities.

Consistency would seem to compel teachers to accord to boys the privilege of dressing comfortably in hot weather. If women and girls may, without protest, wear the thinnest of shirtwaists and gowns, which fashion decrees—and which sometimes approach immodesty—why may not the other sex appear in outing shirts which are so universally accepted as proper in the home and the business house?

After all, dress is immaterial so long as it is clean and decent and does not interfere with the studying ability of its wearers. The high school is no place for displays of extravagance in dress. Women teachers who will direct more attention to modesty and moderation in the cost and style of their own clothes and of the clothes of their girl pupils will do a far greater educational service than they could do by insisting upon "coats" for the young men.

CHANGES IN ADDRESS.

Readers who will change their addresses temporarily for the summer months or permanently for the coming school year are earnestly requested to notify the circulation department of the "JOURNAL" at Milwaukee. Both old and new addresses invariably should be stated so that prompt and accurate mailing service may be continued to all subscribers.

The entire school property of the United States valued at upwards of four hundred millions has gone to sleep for the summer for a period, averaging for city and county, at least three months. Figuring merely the loss on the return which the school property might bring, if used, at an arbitrary five per cent per year, the nation loses the equivalent of \$5,000,000 on its annual vacation. What business firm could afford such a loss on its plant?



School Will Continue During the Summer.

— McOutcheon, Chicago Tribune.

An Important Court Decision

The Supreme Court of Nebraska recently handed down a decision of far-reaching importance and nation-wide interest to administrative school officers. The case briefly stated is as follows: In April, 1908, County Superintendent A. E. Littell, of Wayne County, Neb., wrote State Superintendent of Public Instruction—Jasper L. McBrien, now Specialist in Rural Education with the United States Bureau of Education, Washington, D. C.—making inquiry relative to the character and qualifications of a certain young man who had applied for a high school principalship in Wayne County. The County Superintendent closed his letter to the State Superintendent by saying, "All I have heard of this man convinces me that he is an all-round sport and I appeal to you to help me keep him out of Wayne County." The State Superintendent replied that some very serious charges had been made to him against this man by a member of the school board alleging poker playing; that this board member had urged him to revoke this man's certificate; also that the wife of the County Superintendent of Cass County had said this man was once in her presence under the influence of intoxicating drink. The State Superintendent closed his letter by saying, "Knowing what I do of Mr. ———, I would not grant him a certificate. You have a right to refuse to make his certificate good in and for your county. The court has already refused to force a County Superintendent to issue a certificate to any one who, in the opinion of the Superintendent, is not worthy."

The County Superintendent acting on the advice of the State Superintendent refused to certificate the young man. And as he could not legally qualify to teach in Wayne County he had to give up the principalship to which he had been elected at Windside, a small village in that county.

Mr. McBrien's term of office expired at noon, January 7, 1909. He began the next morning as Director of Extension Work for the University of Nebraska at Lincoln. On the third day of April, 1909, the young man filed his petition in the District Court against McBrien, alleging libel and asking for \$5,000 damages. The case dragged along for two years before coming to trial. In the meantime the saloons were voted out of Lincoln. McBrien took a prominent part in the fight against the saloons. When his attorney asked him at the trial if he knew of any reason why any man should be rejected on the jury he replied in the negative, not realizing that the dominant man on that jury was an ex-saloon keeper of Lincoln whom he had helped to put out of business. Several men who had been called for jury service were honest enough to say they could not believe McBrien guilty of libel and therefore could not find against him. They were excused from service on the jury, of course, without debate or further question. But this ex-saloon keeper said he knew Mr. McBrien well, had voted for his nomination when he first became a candidate for State Superintendent and helped elect him. McBrien, not knowing the man had been a saloon keeper, had no cause for rejecting him, but was somewhat surprised at the young man's attorney not rejecting such an apparent friend of McBrien. The jury brought in a verdict against McBrien for \$1,000. McBrien's friends, tho indignant over the verdict, could not help laughing at him for letting such a friend (?) as this ex-saloon keeper remain on the jury.

McBrien carried the case to the Supreme Court of Nebraska and there his attorneys made their argument in his behalf on the premise of absolute privilege as an executive-judicial officer. On this ground the district judge was urged by McBrien's attorneys to dismiss the case. The judge admitted the soundness of the plea, but said he hesitated to make such a decision, believing the Supreme Court of the State the proper authority to pass upon this point in administrative law.



DR. J. L. MCBRIEN,
Washington, D. C.

Right here it may be well to note the authority conferred by statute upon the State Superintendent of Public Instruction of Nebraska, as well as the mandatory duty placed upon him by the same law. Section 4, sub-division 8, School Laws of Nebraska, reads: "He shall decide disputed points in school law, and all such decisions shall be held to have the force of law till reversed by the courts." Said laws make it his duty to improve the efficiency of teachers and advance the cause of education in the State. He shall advise with school officers relative to the character and qualifications of teachers and upon the manner in which their schools are conducted and ways and means for their improvement.

It was in the light of this law that the District Court in the seventh instruction to the jury said: "However it appears from the pleadings and evidence that the defendant in writing the letter of April 22nd, was communicating to the county superintendent of Wayne county, Nebraska, information touching the fitness of the plaintiff to teach school at Windside, and you are instructed that in so doing he was in the performance of his official duties."

McBrien's attorneys in their brief on this point before the Supreme Court said: "It seems clear to us that a state officer in the performance of his official duty cannot render himself liable because he may be actuated by an unworthy motive. He is performing the business of the state, and if he were conscious of malice in his own heart toward the plaintiff this would be no excuse for his failure to perform his duty. On the other hand, if what he did was in the performance of his official duty it would be wholly immaterial whether in the performance of that duty he was actuated by a good or by a bad motive."

McBrien's attorneys cited noted court decisions in both Europe and America in support of this proposition. They close their brief before the Supreme Court as follows:

"Illustrations might be multiplied of the classes of cases in which the private right of the individual comes in conflict with the rights of the public. It may be safely asserted that in every case where, if a remedy were given for a private wrong the public welfare would suffer, the welfare of the public is preserved by denying the remedy to the individual. It is apparent that the case at bar is one of the class of cases in which public interest quite outweighs the rights of the individual suitor, and in order to preserve the independence of the department of education it is necessary to protect the state superintendent in the performance of his official duty, including the communication to the county superintendent of public instruction

where a teacher proposes to teach, anything known or suspected by the state superintendent concerning such teacher. In writing the letter of April 22nd Superintendent McBrien was performing, as the court below well held, his official duty. Public interest made it his duty to communicate to the county superintendent of Wayne county anything he knew or suspected concerning Mr. DeBolt, and in doing so his motive was wholly immaterial. If he can be made liable because he acted with malice, then suppose the previous dealings between appellant and appellee engendered in the appellant's mind a prejudice, hatred and malice against the appellee, and the appellee was conscious of the existence of such hatred and malice, is it possible that this would entirely prevent him from making the communication? In other words, how could McBrien perform his official duty if he were conscious of malice toward DeBolt? It seems to us absurd to hold that the communication complained of was an official communication and was sent in the performance of an official duty, and then hold that if in sending it McBrien was actuated by malice he would be liable.

"We do not believe that any authority can be produced where the officer in charge of a state department has ever been held liable for the contents of an official communication, and we do not think that this court will make a precedent of that kind by affirming the judgment of the court below."

The Supreme Court's decision is brief, but sustains McBrien's attorneys in every particular. It reads:

"If an officer performs an act in the exercise of his office, which it is his plain duty to perform, his motives for such action cannot be questioned in an action for damages."

Mr. McBrien does not consider this a personal triumph tho he is profoundly grateful to his attorneys and the Court. He looks at it in the broader and higher sense of the public good. He considers it a victory for the State Office of Public Instruction—not alone in Nebraska, but in every other state. Had the decision of the Court been against him no State Superintendent in the future would dare to make honest and fearless reply to inquiries from County Superintendents and Boards of Education relative to teachers of questionable character. It is a decision that concerns the State Department of Education in all the states.

TEACHERS VISIT SOUTH AMERICA.

A company of American teachers are at present in South America to visit several republics under the auspices of the American Association for International Conciliation. Their object is to learn directly something of the life of the countries, to become acquainted with the leading personalities, and to know some of the more important institutions. They aim, too, to familiarize themselves with the methods of instruction in geography, history, languages and institutions of those countries in their own schools with a view of having these subjects better known and more fully taught in the schools of the United States, and of having this instruction better correlated with similar instruction in the other republics.

It is hoped and believed that those teachers who are making this trip will become centers of information in their respective communities concerning South American life, history and conditions. It is expected that the exchange of visits such as this will tend also to develop a larger exchange of students, of teachers, of professors, and of men in different callings and professions.

The party consists of thirteen persons, and is headed by Dr. H. E. Bard of the American Association for International Conciliation.

The party left New York on Saturday, May 30th. They are visiting Bahia, Rio de Janeiro, Sao Paulo and Santos in Brazil, Montivideo in Uruguay, Buenos Ayres and Mendoza in Argentina.

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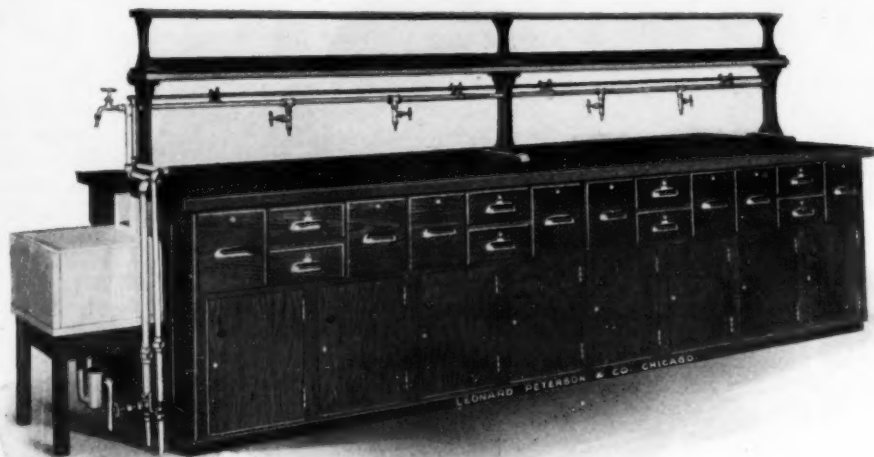
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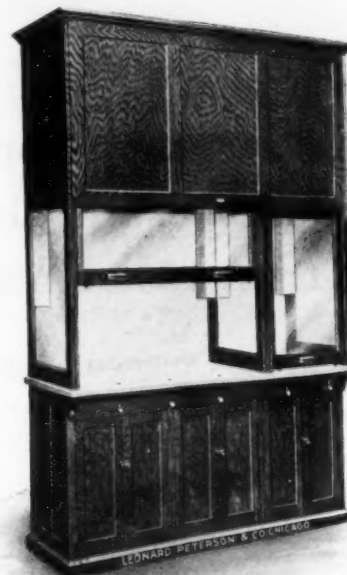
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FIRE AND SCHOOLHOUSES

Superintendent C. G. Persons, Pittsfield, Mass.

"Schoolhouse destroyed." "Pupils march out safely," or sometimes "Pupils caught in schoolhouse fire." "Many smothered or burned to death," or perhaps "Bodies of children found piled against the exit in a schoolhouse fire" are too frequent headlines in our daily press. In fact, statistics show that an average of ten schoolhouses per week are destroyed wholly or in part. Your city perhaps has been fortunate. You read the article and breathe a silent prayer of thankfulness that it happened one thousand miles from your jurisdiction. At least this had been my experience until of late, when a small still voice would inquire, "If it were one of your schools and happened with or without fatalities would your conscience be clear?" Fortunately many of our buildings are of comparatively modern semi-fireproof construction, but others are not. Our fire drills appear effective, but we see them thru long accustomed and perhaps prejudiced eyes. There is, moreover, the consideration of the little things, the neglect of which has too often spelled disaster; the condition of the exits, the arrangement of stairways, the standards of cleanliness and order in the boiler room, the system of alarm which is perhaps dependent upon uncertain dry cells, poorly located, or uncertain in effect. Then, too, while life is of first importance, what about the building? Are these possibly of faulty construction? Is the heating plant in a safe condition? Are the general elements of risk large or small? Is the building equipped to fight a fire once under way? These were some of the questions which came to me again and again, and which I could not answer satisfactorily.

An Independent Committee.

Many of the points raised were technical, and outside the knowledge of the members of the

school board. Moreover school boards are expected periodically to request additional appropriations, and there is too frequently a reminder of the fable wherein the boy cried, "Wolf! wolf!" For these reasons our school board appointed a committee of citizens who were qualified to give expert advice. This committee consisted of an insurance adjuster, an architect, a builder, a construction engineer, a manufacturer, and the local chief of the fire department. It is probably true that this committee took up this work of examining the school buildings more in the spirit of a civic duty than from any real interest in the matter. That their point of view became one of deep personal interest is suggested in their report. What is true in this instance would be true of any citizen or committee who visited a school and saw perhaps for the first time a fire drill by the pupils. In no other way can one appreciate the responsibility placed upon the public in maintaining school buildings free from any reasonable risk of fire, adequately provided with proper methods of egress, and equipped with means of fighting a fire, before outside aid could be secured. The major portion of the report submitted has an application to any city, especially where there are included a number of older buildings. We believe that the method pursued was one which secured the best advice. It is apparent also that a greater interest was aroused among the public and in the city government than had the entire matter been handled by the school board itself. The report of this committee which follows is as presented except that the section which applied to specified schools has been omitted. This section is of local interest only.

This is the day of surveys, and any superin-

tendent will do well to urge a special survey along the line of fire protection of the pupils. After a calamity has struck home "safety first" may appear as important as retardation, time schedules, and sundry other phases of our daily occupation.

The Report.

To the Pittsfield School Committee.

Your committee upon the investigation of the public school buildings in reference to their fire protection beg to submit the following report:

A recent investigation shows that in this country ten school buildings per week are destroyed by fire. However fortunate a community may have been in the past this statement shows the extreme importance of adequate precautions against fires, of well organized and steadily practiced fire drills, and of sufficient and safe methods of egress. This academic viewpoint becomes a live issue after a visit to a few school buildings. As one watches the hundreds of children passing out steadily in a rehearsal of the fire drill one appreciates, as would be possible under no other circumstance, the tremendous moral responsibility placed upon the school authorities in safeguarding the life of every child. With the memory of the Collinwood disaster in mind it is only too easy to see how the neglect of some simple precaution might cause a repetition of such a disaster in any school building. No body of citizens watching a fire drill would care to take upon themselves the responsibility of neglecting any precaution to insure the safety of those whom the law demands shall attend the schools. No expense of structural alterations or the installation of safety devices can be measured against the life of a single child. This spirit of responsibility was appreciated by your committee as they took up the work of investigation, and is the controlling motive of the report which follows.

Factors of a Survey.

An investigation of a school building in re-

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spect to general fire protection must include
four factors; first, the prevention of fires due
to carelessness or structural defects in the
building; second, the equipment of the build-
ing with adequate means of fighting a fire;
third, structural changes to insure safe and
proper methods of egress; fourth, fire drills and
fire alarms. Your committee has visited all the
school buildings of the city of two or more
stories in height. They have examined the
buildings with special attention to the points
noted above. Fire drills have been held for
their inspection. With the exception of the
newer schools conditions are dissimilar in the
various buildings, and each was considered
separately in the matter of recommendations.
It was found, however, that an analysis of the
school plant as a whole made it possible to sum-
marize the more important changes as general
recommendations applicable to all schools ex-
cept where exceptions are specifically noted.

There can be no question concerning the ne-
cessity of proper standards of cleanliness in the
buildings and particularly in respect to the
boiler rooms and basements. The improper care
of hot ashes, loose papers, oils, rags, etc., are
the most frequent causes of fires. All these arti-
cles necessarily are present. The important
point is to see that they are disposed of or
cared for in a manner which insures the small-
est margin of risk.

The Care of Basements.

Where boilers are too near the ceilings, or
the ceilings are of such material or in such
condition that there is danger of fire at any
time automatic systems of alarm and automatic
sprinklers are imperative. This condition is
particularly true of several schools and demands
immediate attention. It must be remembered
in this respect that janitors are not in the base-
ments at all times. Most schoolhouse fires start
at this point and unless there be an immediate
warning the fire may gain serious headway be-
fore it is discovered. Once a fire is under way

and the building is cleared of occupants there
arises the question of saving this property.

Hand extinguishers serve the purpose up to
a certain point. Beyond this point the use of
water is necessary. Some of the schools are
equipped with stand-pipes. Their value to the
janitor and fire department are unquestioned,
and such stand-pipes properly equipped should
be installed universally.

The disaster at Collinwood was caused by an
improper exit against which the pupils were
piled up either to be smothered or burned to
death. Our State Laws specify regulations
concerning the exits. These should be enforced
and in certain instances exceeded in the matter
of safeguards. All doors should open out
easily when pushed even by a small child, and
should be held open automatically until re-
leased. Stairways should be clear of incum-
brances, should be easy of descent and should
deliver pupils rapidly to direct exits without
danger of congestion.

Three conditions should govern fire drills by
pupils. First, all pupils should leave the build-
ing at once; second, they should proceed stead-
ily, and in the most direct manner to the sev-
eral exits; and third, drills should be held fre-
quently to insure a thoro familiarity with the
drill.

Regulations to Govern Fire Drills.

Upon the discovery of a fire the alarm should
be sounded at once. Nothing should interfere
with this rule.

Pupils should leave the building in all drills
without wraps. They should proceed steadily,
but should not run.

Drills should be held at least once a week.
These drills should be held at different times,
and under all the varying conditions which
pertain to the distribution of the pupils.

Teachers or large pupils should be assigned
stations at all important points where conges-
tion might occur, upon landings and at the

doors. It should be the duty of some to throw
open the outside doors.

In case the toilet rooms are located where the
alarm may not be heard these rooms should be
inspected to see that they are clear of pupils.

After the alarm is sounded the janitor should
give his attention to the fire.

It should be the duty of some teacher to not-
ify the Fire Department.

In all arrangements the first consideration is
to clear the building of pupils. Attention to
the fire and the calling of outside help are of
secondary importance. The saving of personal
or public property is not to be considered
against the possibility of losing life.

Principals should hold themselves free to
supervise the drill. Any necessary details should
be assigned to specified teachers.

Principals should inspect the basements at
least once a week and report any dangerous con-
ditions to the superintendent. The basements
should be inspected periodically by an inspector
from the Fire Department.

General Recommendations.

The present systems of fire alarms in the
school buildings are very unsatisfactory. In
certain schools it is necessary for the janitor
to go from the basement to the second floor to
ring the alarm. In few of the schools is it pos-
sible to ring the alarm from the basement and
each floor. The regular service bell is used in
all but one school. Some bells are too small to
be heard thruout the building. Some bells are
struck by hand, others are a part of the regular
electrical system, and subject to the vagaries of
overworked dry cells. Scarcely any two schools
use the same system of alarms. These condi-
tions lead to the possibility of the alarms being
out of order, or not being heard or understood,
and of too much delay in being sounded. It is
recommended therefore that a uniform alarm
system be installed. Such a system should be
on a separate circuit, and consist of continuous
ringing gongs with boxes on each floor, in the

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basement and at any other points which a particular building may demand. This system of alarms to be installed under the supervision of, and to be regularly inspected by the Fire Department.

Basements should be plastered on metal laths. Basements should be equipped with automatic sprinklers. This recommendation applies particularly to schools where the basements have Georgia hard pine ceilings; where there are hot air systems; where the ceiling beams are exposed, or where the ceiling is on wood laths and in poor condition, which is true of several schools.

Hand extinguishers should be on every floor and in the boiler rooms. These should be located in conspicuous places. They should be charged annually by the Fire Department. All

buildings should be equipped with stand-pipes fitted with the Vinette cocks. Because of its construction and size the high school should have two stand-pipes placed at the north and south ends of the building.

All exits from the building should be equipped with panic bolts. There should be also automatic catches to hold the door open.

All receptacles for ashes, waste paper or general rubbish should be of fireproof construction, either concrete or brick. Steel cans of sufficient number will serve the purpose in the smaller schools. No ashes, paper or rubbish should be placed against or near a wooden partition.

Storm doors should be constructed of a width equal to the regular exits of each building. These doors should be equipped with panic bolts and catches or should be double action.

supplies are waste of time. When a pupil needs supplies he ought to know where to get them and how to get them without disturbing the teacher or the school. The pupil's attitude should be active, not passive.

The pupil should always be supplied with pencil and paper for the purpose of making abstracts of sufficient importance to offer as a contribution in the recitation. This will train to differentiate essentials and non-essentials in lessons. It will also cultivate the power of organizing the essentials of a lesson into a brief form.

The study period is not intended to enable the teacher to study his lesson or to mark papers. Neither is it a good plan to have the pupils rise and pass to the teacher's desk while others sit and wait and watch for their turn, or possibly stand about the teacher's desk waiting.

Several things are essential in conducting a recitation. The teacher must be a master of the subject matter. He must have clear and definite ideas as to the essential points of the lesson. He must have this mastery and clearness of vision not for the purpose of reciting the lesson, but in order that he may direct intelligently, and pass judgment on the work of the pupils. Pupils ought to be encouraged to discuss adequately the assigned subjects. A single word is not a discussion. They ought to express themselves in sentences of definite content and paragraphs of related ideas. After a pupil has made his contribution on a given subject, the other pupils of the class ought to supplement or pass judgment on the matter presented. The raising of the hand, as a rule, ought not determine the individual who supplements the discussion. Every individual should be held responsible for a contribution at any point in the recitation. Fear, humiliation, and ridicule, should be abolished. Talk on the part of teachers which is vague, verbose, and unrelated to

Directed Study and the Recitation

A. S. Martin, Superintendent of Schools, Norristown, Pa.

Two things are essential in training a child in school. He must gain impressions. He must acquire the power to express intelligently the impressions gained. During the study period the pupil learns how to gain impressions thru his own initiative. During the study period the child acquires the habit of self-help. The recitation offers an opportunity for self-expression. During the recitation the child acquires the habit of clear and full self-expression.

In the Norristown Public Schools, elementary and high, provision is made for directed study so that the child may gain, with a minimum amount of time and effort, habits of systematic industry and concentrated self-help. Regular periods are set apart during which the teacher's whole time and energy will be devoted to the direction of the study of the pupils. When difficulties hamper the study of a pupil,

the teacher will give only the needed assistance and in such a manner as not to disturb the other children.

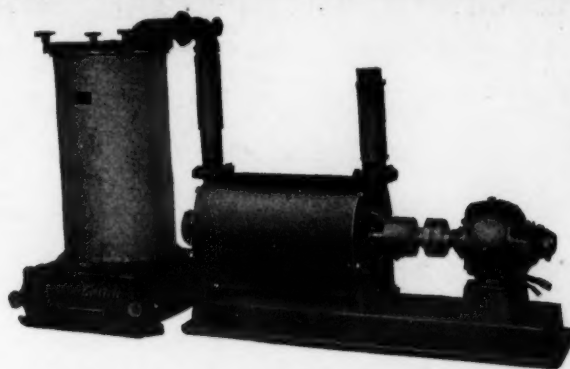
Several things are necessary for effective study. The physical conditions of the room must be conducive to good health. Apparatus, books, and supplies should be convenient and in orderly arrangement. There should be no time wasted in conversation or disorder of any kind. The pupil should begin work immediately after the class has changed. The teacher's motive ought to be to inspire the child with a desire for vigorous study. He should assist a pupil when it will prosper study. There should be no spasmodic or trivial announcements on the part of the teacher during the study period. Raising the hand and waiting for the assistance of the teacher are waste of time. Raising the hand and waiting for permission to ask for

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the lesson should be eliminated. Time consumed by the teacher in such talk abridges the time which ought to be given to the pupils for the purpose of exercising them in expression.

The teacher's estimate of the deportment and progress of a child becomes tangible thru the system of marks. A child marked B, C, or D, in deportment should be informed why he did not receive an A. The court always states the offense when a penalty is imposed. How can a child be expected to improve in conduct if he is not informed in what respect his conduct is objectionable and how he may meet the requirements of the school. A child marked B, C, or D, in his lessons ought to be told why he did not receive an A. His deficiency should be pointed out to him. He should be told how this deficiency may be removed. How can a child improve his work if he does not know in what particular his work is considered unsatisfactory? Marks should never be given spasmodically or when the teacher is under excitement. The marks given should be for the particular month for which the report is issued.

Assignments should be clear and definite. The assignment of a lesson has a direct bearing on economy in study. The attitude of the pupils will indicate whether the assignment is satisfactorily made. It ought not to consume much time. The assignment becomes the aim of the next lesson and determines the work of a whole class. If it is improperly made, it may waste considerable time of every member of the class.

Explanations by the teacher of new subjects and of abstruse portions of subjects already studied by the class are necessary. Impression precedes expression. For this reason the largest possible amount of time should be given to directed study. If a whole period is necessary to develop a new or a difficult subject, the recitation period probably should be utilized. What pupils do intellectually, ethically, and indus-

trially makes more for efficiency than what they see or hear. Practice brings skill. Exercise develops power.

CLOSING SCHOOLS IN EPIDEMICS.

The best public health experts agree that epidemics of contagious disease in urban communities cannot be combatted successfully by closing the elementary and high schools. They are not agreed similarly that a continuance of school sessions is advisable in country districts and villages where the public health service is not thoroly organized and where daily school inspections are impossible.

The schools of a city, under a good system of medical inspection, constitute a public health agency, whose efficiency is only beginning to be appreciated. In the country the very opposite is true in that the ordinary district school, which is without health supervision, is the clearing house for the sickness of the neighborhood.

Contrasting the health situation in city and country schools, the official organ of the American Public Health Association says: "In his able paper on the subject, Dr. F. G. Curtis has argued that the schools, under good systems of medical inspection, form one of the most efficient organizations for prevention. Reasonably well guarded at all times and with closest scrutiny when danger is suspected, the school children are under excellent supervision. The value of this scrutiny may depend upon some factors outside health work, such as whether it is the health department or the school committee that looks after the condition of the scholars, but if there are deficiencies here they are of administration and not of principle.

"School keeps the young people under supervision and hygienic environment for a number of hours a day. There is reason to believe that but little infection is distributed and that it takes the lines of less resistance, the street play and home hours. Closing city schools turns

the children practically into the street for all the time and in reality increases the chance of infection. But this is in the well-guarded city; to what extent is the policy a proper one for rural schools?

"It stands to reason that the health officials of the village are not so well fitted for the kind of action that an outbreak of infection demands. Too often the health work is the part-time duty of the health officer, who must have his private practice or starve, for the scanty salary will not support him. Any outbreak therefore appeals to him first as a physician. It calls upon his time, and takes his professional attention and just when there is most need of him as health officer he is in greatest demand as a doctor. Half a dozen Massachusetts towns have recently demonstrated the truth of this and the state has come in to define and work out the situation. Under circumstances like these may not the closing of the schools be the proper course?

"In the country the children come to school from widely separated homes. They live in little scattered groups whose members should be quite free from risk from the outside. The school brings them together. At their homes they do not gather in great groups on the street. The situation is radically different from the city, and it would seem that the greater contact is in the school.

"The rural school would be of less consequence as a focus, were a system of adequate inspection possible. But here again is a weak spot in rural health administration; good school inspection is costly and in the country it is difficult to maintain of standard quality.

"Under these conditions and till the efficiency of rural health work can be maintained at a high standard, may it not be well to recognize a differing environment and allow that schools and churches, even, in Massachusetts may be closed in times of serious outbreaks as a measure for the protection of the people?"

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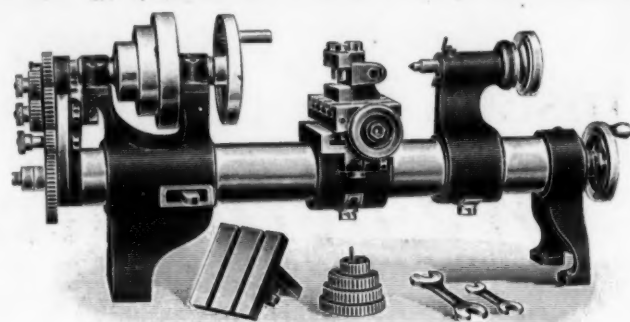
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THE VALUE OF CONVENTIONS.

(Concluded from Page 21)

pense, or even on furlow without an expense account, he is under constant strain in his work to show that he has profited in some way from the proceedings for himself and the concern that has sent him. Before his retirement the writer was sent twice to attend educational conventions at the expense of his employers and in each case he made out an elaborate report, setting forth not only the proceedings but also indicating in what manner and to what extent the proceedings might be useful to the company.

On the other hand, during all these many years the writer has attended educational conventions, two, three and sometimes four a year, no member of the ever changing membership of the board of education has ever asked the writer, officially or unofficially, what he has seen, heard or learned. So long as members of school boards take no interest to find out whether the money appropriated for going to conventions is used profitably or not, so long as they do not treat the acquisition of knowledge, of information, and of advice by the superintendent, supervisors and principals, paid for by the taxpayers, as a business for business sake, so long much of the taxpayers' money will be wasted without bringing anything serviceable back as a compensation.

Every superintendent, supervisor, principal or teacher who has attended an educational meeting at the taxpayers' expense, should be required to unfold before a teachers' meeting the salient points brought out at the convention and to point out to what extent they are or are not applicable to local conditions, and furthermore in what way the convention has promoted educational progress.

The adoption, by school boards, of such a requirement would react favorably upon conventions; it would prevent a tendency to take useless trips. It would be a powerful incentive to study the subject matter of the program as

well as the local and national situation, and if the different items of the program were gone over at such an experience meeting, as it might be called, there would not be much chance to skip, the writer knowing a case where a superintendent made a big splurge about his attendance at a convention, but skipped what he felt he could not master.

Keeping school is a business like any other business. That it produces human products instead of material products makes no difference in the aspect of what the school stands for. The continued clamor that there must be business men upon school boards is not very intelligent as long as the main object of the school is treated in an unbusinesslike way. No amount of businesslike application of the taxpayers' money for buildings, etc., will compensate for this deficiency. Upon the other hand there is need of business training for teachers. By that

the writer does not mean the school work is not carried on in a prompt, efficient way, nor that educational conventions are not handled as well as conventions of business men or engineers are managed. The Boston convention of the N. E. A., in 1903, with its 35,000 members, was a single but ample proof of the energy, devotion, foresight and management of the teachers.

Nevertheless, with the increasing demand to bring the school closer to the outside world, with the necessity for the school to help in the readjustment of millions of industrial workers in shop, store and office to a new social-economic status, with vocational education and its related economic problems more and more forming an integral part of our educational system, the teachers are not trained to grasp all that is needed as implied in methods in the schoolroom and the business of preventing waste of talent and time in keeping school.

The Portland School Gardens

M. O. Evans, Jr., Supervisor

The Portland, Oregon, schools, this season, have 43 school gardens, varying in size from 30 by 40 feet to one and three-fourths acres, and covering a total area of approximately sixteen acres. This is an increase of fifteen gardens over the year 1913. The total registration of children in the school gardens is 8,100; home gardens number 3,500, a total of 11,600. About 1,000 children have gardens both at home and school, making a total of 10,600 individuals actually participating in the work. This is 39 per cent of the total public school enrollment, and 47 per cent of the Grammar grades to which the work is largely confined. The total registration shows an increase of 40 per cent over 1913.

Work was begun December 1, last, by locating suitable pieces of ground and preparing them

for use. Many of them were in heavy sod and were plowed during the winter. Two hundred and ninety-six loads of manure were hauled and spread upon the ground and fifteen tons of ground limestone was applied at the time of disking, or final harrowing. Planting was begun the last of March, but was greatly delayed by two weeks of wet weather. The planting of vegetables, except for second crop radishes, late potatoes and cabbage, was practically complete May 5. Altho the contest for prizes is primarily for vegetables, the planting of flower seed and setting of flowering plants is encouraged. Nearly all the school gardens and many of the home gardens have borders, or beds of flowers at the corners, center, or across the front, sides, or rear. Several fences are covered with different

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sorts of climbing ivy, wild cucumber, nasturtiums, etc.

It is likely that many of the gardens will be continued actively thru the summer, especially in districts where most of the pupils spend their vacation at home. In these gardens later maturing vegetables, such as potatoes, beans, corn, pop-corn, pumpkins, late cabbage, cauliflower and tomatoes have been planted in addition to the early ones such as radishes, lettuce, turnips, beets, carrots, dwarf peas and early cabbage. The Stephens school has the unique distinction of having a pop-corn and pumpkin garden. Some fine looking white rice pop-corn seed was secured, grown in Multnomah county. It gave nearly 100 per cent result in a germination test. Pie and mammoth pumpkin plants were started

at home by the pupils and have been set in the open. Many pupils have raised lettuce, cabbage, tomatoes, pepper and flowering plants for transplanting. These have been raised indoors at home, in the schoolroom, in small hot-beds, or in cold frames.

The work this year in some places is taking on more the character of regular school work. In those schools in which whole rooms are interested the pupils have been taken out twice a week for garden work. In other schools most of the work has been done outside of school hours. In many places the amount of ground available for garden purposes is very limited and can only serve as a demonstration garden where the pupils may learn how and why, while continuing their operations at home on a larger

scale. At a considerable number of schools the gardens are large enough to provide every interested pupil above the third grade with an individual plot varying in size from 35 to 108 square feet. Those below the fourth grade work together by rooms. In several schools the number of interested children so far exceeds the proportion of ground space that each room has a section and each pupil a row, or part of a row.

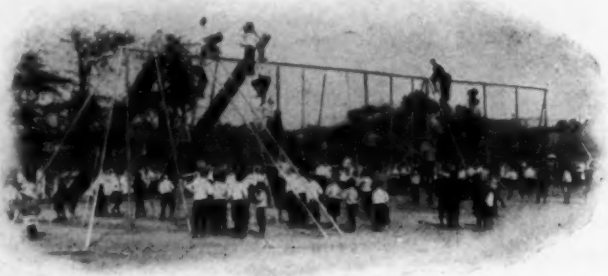
No two gardens are exactly alike; each has some distinguishing feature of arrangement, decoration, or variety of vegetables grown. Only eight of the forty-three pieces of ground used are school property. These and other pieces which will probably be available for longer than this year are being fenced.



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BUSINESS APPLIANCES AND THE COMMERCIAL HIGH SCHOOL

Of all the problems of education, the constant readjustment of the organization of schools and of courses of study, requiring radical changes in the textbooks and other teaching tools, is the most difficult. It involves a watchfulness and an open-mindedness on the part of teachers and administrative officers that is entirely opposed to the ever present tendency to be guided by tradition, to follow routine and to work along lines of least resistance. In the general school whose purpose is to give general culture and to develop character, this struggle for readjustment is not so severe or so harsh because changes do not follow rapidly and methods and materials have been tried out for generations. But in the newest types of vocational schools where students are to be directly prepared for a distinct breadwinning calling and where the discoveries in the applied sciences, the inventions in the arts and industries and the changes in commerce are rapid and radical in their effects, the task of the teacher and the school to "keep the pace" is heavy. It demands an understanding of conditions and tendencies and a constant watchful study. In brief, the teacher must be "ever in school himself" learning the new processes, studying new machines, applying new principles in his daily tasks.

In a peculiar way the Commercial High School is called upon to keep up with modern methods if it is to realize its true, primary function of turning out trained workers for the office, the counting room and the bank. It is very well for the young man to know how many rods make an acre and how the least common multiple is found. Yet, this knowledge will give the school no credit and advance the young fellow by not a single step if he be asked to make a rapid calculation in which short-cut methods will save valuable minutes. A knowledge of single-entry bookkeeping or

the old-style day book will not help him take a small set of double-entry, loose-leaf books in which labor is reduced to a minimum by such complementary helps as an adding machine and a billing system that writes invoices, delivery slips and journal entries at one operation.

The stenographer who can write a hundred words a minute and transcribe them accurately is at a decided disadvantage if she does not know how and when to clean and oil her type-

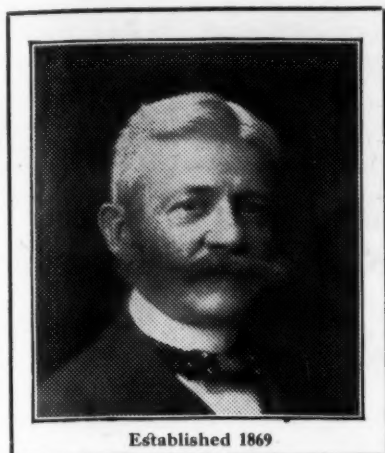
writer, and how to locate the trouble when something goes wrong. She must begin her schooling anew—at the expense of her employer's time—if she cannot handle a card-index system or a vertical file, cut a mimeograph stencil or operate an envelope sealer.

The principle in school administration which declares it to be the duty of administrators to discover and supply appliances which are necessary for making teaching effective, applies with particular effect to the commercial high school.

The truth of this principle has been recognized by the best schools. So, for instance, the Omaha High School of Commerce has a model office fully equipped with the machinery and



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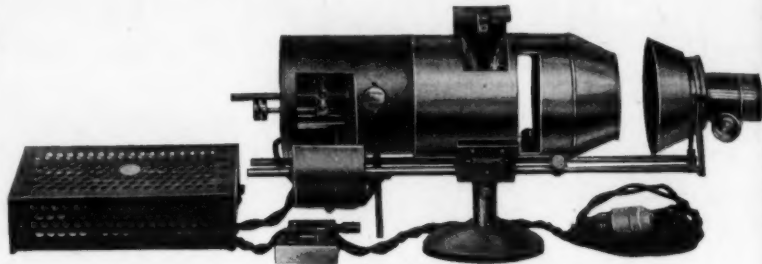
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devices to be found in the most modern business offices. The school was organized two years ago as the Commercial Department of the Central High School, and transferred last year into a separate building as an independent school where it has grown beyond all expectations and taken a leading position among commercial high schools of the Middle West. The enrollment this year is 845, and the first class to complete the two-year course met with remarkable success in securing and holding first class positions. Thirty-four instructors, with thorough preparation for this line of work, are employed.

The model office includes a multigraph, business phonographs, adding typewriters, mimeographs, letter-presses, vertical files, card-indexes,

adding machines and a number of smaller devices. The students are taught the principles of construction and operation of modern business office machines. Work is taken out of business offices and is assigned just as a businessman would assign it.

Principal L. C. Rusmisl is authority for the statement that the school has the hearty support of the local commercial club and industrial organizations, the great railroad companies, wholesale houses and banks. The work in both the two-year and four-year courses does not duplicate that given in the academic high school, but is arranged to meet directly the demands of the business public. The studies offered in the two courses are as follows:

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*Bookkeeping or }	*Bookkeeping or }
Shorthand and }	Shorthand and }
*Typewriting	*Typewriting
Commercial Arithmetic	Commercial Geography
†Commercial Correspondence	†Business Forms
†Penmanship	Local Industries
†Spelling	Second Semester.
Second Semester.	Business English
Business English	*Bookkeeping or }
*Bookkeeping or }	*Telegraphy or }
Shorthand and }	Shorthand and }
*Typewriting	*Typewriting
Commercial Arithmetic	Commercial History
†Civics (Omaha Gov.)	Commercial Law
†Penmanship	†Rapid Calculation
†Spelling	

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Commercial Geography	Industrial Chemistry
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Applied Physics	Lettering and Practical Design
Commercial German or Spanish	Commercial German or Spanish
Second Semester.	Second Semester.
Business English	Business English
Reporting or }	Commercial History
Advanced Accounting and Banking	Elements of Transportation
Commercial Law	Industrial Chemistry
Advertising	Higher Accounting and Auditing
Applied Physics	Lettering and Practical Design
Commercial German or Spanish	Commercial German or Spanish

*Double period recitation, no home study.
†Drill Subjects, no home study.

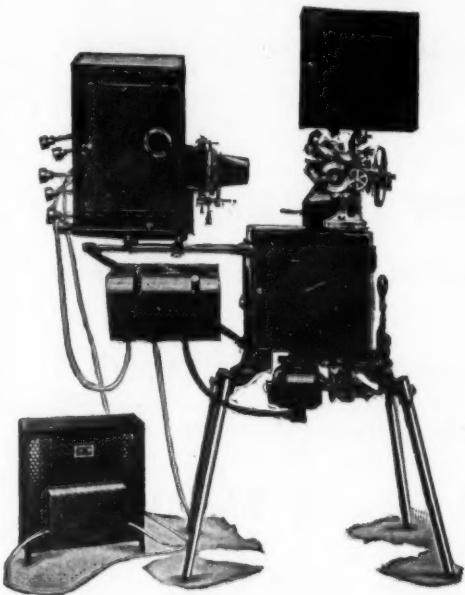


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Efficiency in the Schoolroom

Frederick Eames Cooper, Providence, R. I.

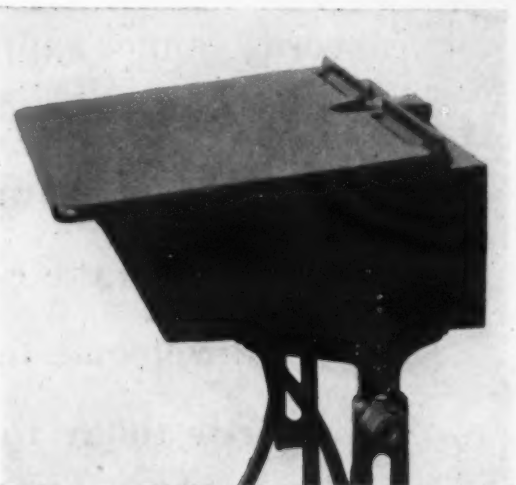
The Industrial world is awakening to the fact that the dynamo of the human body is capable of generating a certain amount of energy,—and that the less expended in overcoming fatigue, the more is available for production. It is for this reason that various operations are being submitted to an intensive study of the unit motions and equipment,—to the end that all unnecessary fatigue may be eliminated and that the energy formerly required to overcome this fatigue may be drawn upon for increased output. The question of the equipment, the proper height and style of the work benches and chairs is by no means the least in importance. A recent issue of "Engineering", in discussing this question, remarks, "Owing to the

initiative of Frank B. Gilbreth, a museum for devices for eliminating fatigue in industry has been started in Providence, R. I. One of the nucleus exhibits consists of factory stools and chairs of various kinds adapted to many kinds of work and for both men and women employees."

The museum idea might well be extended to the school system and a collection of all the different types of school furniture now in use placed on exhibition that the committees on buildings and equipment might be able to visualize their problem when the question of the best equipment to buy is before them.

It is contrary to the laws of Nature that the child should be confined to the schoolroom,—at least with the equipment that is prevalent in most schools today,—but since our civilization demands that this method obtain, it is for us to exercise the greatest possible care that his bodily health is not impaired in the process of cultivating his mind.

The number of cases of curvature of the spine and near-sightedness, caused in the elementary schools is well known. Mrs. Ella Flagg Young has many times been quoted and that fact argues well for the authoritativeness of her utterances on the subject. I beg the privilege of quoting her, not because she is rather well known—but in order that I may indicate the demands, the solution of which it is the purpose of this paper to recommend. She says, "thruout the United States statistics show a marked increase in curvature of the spine and eye troubles in children in the elementary schools beginning with the age of nine years. It is the consensus of opinion of students of the question that the flat top desk is in a large measure the cause of this increase in curvature



Top Pulled Forward for Writing.

of the spine and near-sightedness, when children begin to spend much time in reading and writing at their desks. I recommend that authority be given to experiment in a few schools with the use of a box with the top slanting at nearly the average reading angle, which is 35 degrees,—this box to be placed on the desks of the children in the grades above the first and to be constructed by the board."

It is not that we have failed to recognize the need of better equipment in our schoolrooms,—but that perfectly acquainted with the existing vicious conditions, we have not done a great deal towards remedying them,—that elicits unfavorable criticisms of our educational system. These evils are all so well known that it will profit nothing to restate them and I need but refer to an article by H. Bedford Jones in the AMERICAN SCHOOL BOARD JOURNAL for July, 1912, which goes into some detail and presents the situation in an admirable manner. I cannot hope, either, to revolutionize the school-

(Continued on Page 44)



Desk Closed.

WARNING!!!

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Do not believe those gentlemen who sell other than slate blackboards when they tell you we are "oversold" and cannot handle the rush.

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Granville Hahn, Walnutport, Pa.

E. J. Johnson, 38 Park Row, New York City

Lehigh Slate Mfg. Co., Bangor, Pa.

North Bangor Slate Co., Bangor, Pa.

Parsons Bros. Slate Co., Pen Argyl, Pa.

Penna. Blackboard Co., Slatington, Pa.

Phoenix Slate Company, Wind Gap, Pa.

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It tells you first about the black Slates of Northampton and Lehigh Counties in the State of Pennsylvania.

It tells you how slate is quarried from good old mother earth, sawed, split, rubbed and shaved ready for delivery at your school building.

It then argues the properties of slate from the standpoint of the user who should never attempt to buy anything but the best, which in its last analysis is the cheapest.

Next, there are specifications on the matter of frames, perfect slate blackboards, sizes, etc.

It's all so good you ought to get a copy and read it for yourself.

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Crown Slate Company, Pen Argyl, Pa.
Diamond Slate Company, Pen Argyl, Pa.
Excelsior Slate Company, Pen Argyl, Pa.
Granville Hahn, Walnutport, Pa.
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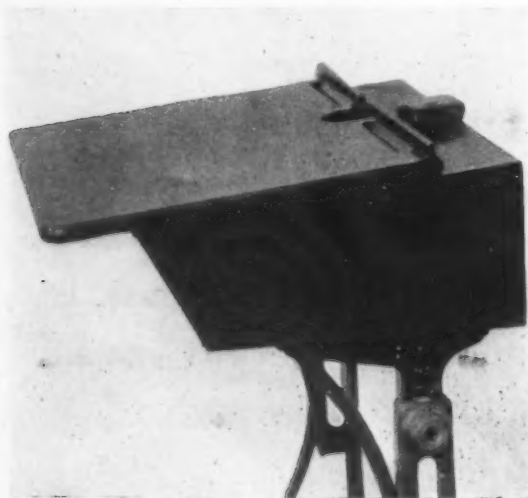
room equipment or remedy all the evils with one stroke. There has, however, come to my attention, while studying the question, a type of furniture which from the point of view of Motion Study, more nearly approximates the perfect than any other I have ever seen.

The first consideration is that the child shall be comfortable at all times and at all kinds of work and since it is not feasible to have several types of desks and chairs for the various types of work, we must find one set that admits of many adjustments to accommodate the various demands. We must take into consideration more than the gross height of the child. For, as Mrs. Young has so pointedly said, "All desks are made the same height but all children are not the same length." Individuals, too, of a height, vary greatly in the length of their limbs and the chair adjustment must be independent of the desk. Then the desk must be

adjustable as to height to assure the proper position of the elbows and shoulders and prevent rounding of the shoulders and contraction of the lung cavity. But this is not the only variable.—Children vary in stoutness and since the desk and chair obviously must be secured to the floor, an adjustment must allow for these differences. In fact, the desk must have what is termed a plus and minus adjustment. This adjustment must be simple and easily and quietly operated so that the child may adapt the desk to his individual need without difficulty or disturbance. The desk top must be large enough to allow ample work space for all types of work and must have an adjustable slant to relieve the eye strain and rounded shoulders, the inevitable result of the existent flat top type. This adjustment is correlative with the suggestion of Mrs. Young in her report and its importance must not be underestimated. As a by-product of this position we also

secure the logical position for drawing. The child is thus enabled to view his drawing at approximately the same visual angle at which he sees the object to be drawn and better work and very much less eye fatigue must be the result.

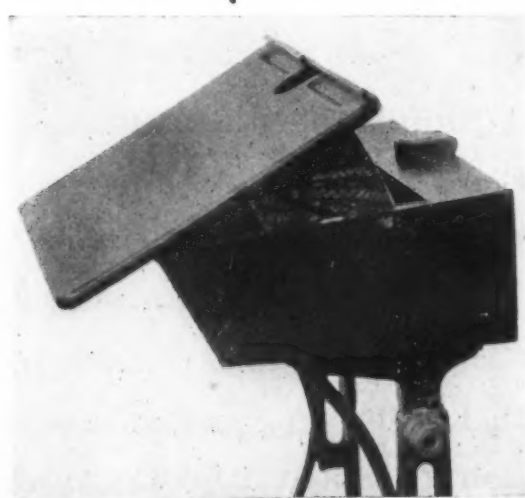
The one remaining requirement of modern schoolroom furniture is that the desk top be adjustable as to height,—that is, convertible into a flat top table at which the pupil may stand and work. This is a very valuable asset to any schoolroom,—but more especially perhaps, to the technical schools. In no schoolroom, however, should children be required to work sitting all day. This hypothesis is verified by the fact that recent experiments have proven that workers are much more efficient, and less fatigued at the end of the day, if a certain part of the time they are allowed to sit and the remainder to stand. A certain definite part of the school period should be devoted to work at



Top Fully Extended for Writing.



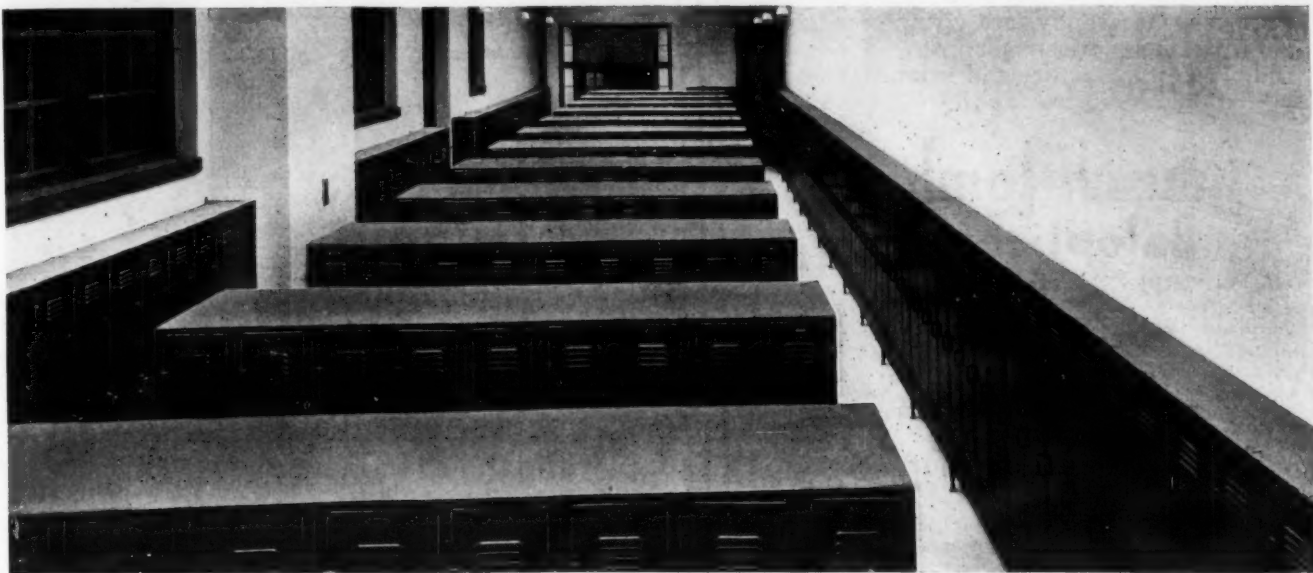
Top Raised for Standing Recitation.



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which the children may stand at their desks. Thus the blood pressure is changed and the body relieved of strain caused by sitting too long in one position. It will be found, also, that a large amount of the restlessness will thus be naturally overcome.

This question of standard equipment is a big one and it cannot be decided by arbitrarily adopting the cheapest on the market. It is a question for careful and persistent scientific research. In this connection I feel that the work of Mr. Leonard H. Campbell, of Providence, is well worth mentioning. The cuts of the furniture illustrating this paper were kindly loaned and illustrate the type of furniture he has evolved after long study of the question and which is being used to advantage in the Technical High School of Providence.

I believe that a Federal Commission, working under the direction of the United States Commissioner of Education, should be appointed to study the question and make recommendations to the whole country. I further believe that Motion Study can do a great deal towards arriving at the solution, and provide standard equipment which shall be scientifically best adapted to the purpose from the point of view of least waste energy and from the point of view of satisfying physiological laws, and that by so doing we are in no small degree helping to produce a better, healthier and more efficient people.

A KINDERGARTEN PIONEER.

Prominent among the men who have been identified with the beginnings and the present growth of the school and kindergarten supplies business in the United States is Mr. Thomas Charles of Chicago. His name is known thruout the country and is familiar to every kindergarten in the Northwest who has distributed a "first gift".

Mr. Charles is a native of Indiana, a son of a family of sturdy North Carolinians, who came North during the early period of the migration to the Mississippi Valley. He spent his boyhood days on a farm and took up teaching in a dis-

trict school at a very early age. He graduated when thirty years of age from a college established by Horace Mann, and in a few years opened a private school in Indianapolis. His success as a teacher led to his employment as an institute conductor, and he traveled extensively over the state, in this work. His acquaintance with teachers and school officials was second to no other schoolman of the state and his popularity was hardly less.

In the early seventies, Charles Scribner & Co., appreciating Mr. Charles's knowledge of school affairs and his acquaintance among schoolmen, established him in an office in Chicago. His agency work was an immediate success not only in his home state, but also in Illinois, Michigan, Wisconsin and other states. During this time, his intimate knowledge of school tendencies led him to foresee the growth of the kindergarten

and the opportunity for building up a business in materials and literature for kindergarten use. Accordingly, in 1882, he was induced to take the Western agency for Mr. Milton Bradley, who had begun to manufacture kindergarten materials in Springfield, Mass. The venture was a success and from it has grown the splendid firm of Thomas Charles Company.

During the first year, Mr. Charles carried a stock of only \$50 worth of goods and kept all of it in a little showcase, three feet long, which is still in the firm's store. In 1890 the business was incorporated.

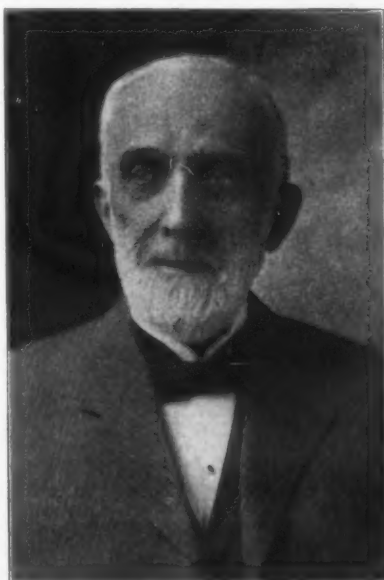
Mr. Charles assisted materially in securing action by the legislatures of Illinois and Indiana by which kindergartens might become a component part of the public schools of the state.

Since 1900 the growth of the firm has been such that Mr. Charles has gradually withdrawn his activities from the sales work to devote himself to the executive and financial details. While he has retired from traveling, he is active as ever and may be found at his desk every day, at 207 North Michigan Avenue.

Two ideals in Mr. Charles's business philosophy are particularly observable by men who come in contact with him. The first is the constant effort to be of service not only to kindergartners, but to all those with whom he comes in contact. An incident which happened a few years ago, illustrates his kindly, helpful attitude. A young man employed by the firm had gotten into some difficulty while Mr. Charles was away on a trip to Florida. In giving his decision for the disposition of the matter, he wrote: "I want to say that I have always felt that our influence upon the young people, that are associated with us in this business, is of more importance than any money we might make."

A second principle which is noticeable to younger men, especially, is his unfailing geniality and kindness toward all who come into his office. The most callow solicitor is as welcome as the largest buyer and is treated courteously.

Mentally and physically still in his prime, Mr. Charles is a fine type of the men who are engaged in the school trade. In a very valuable way he is contributing to the growth and efficiency of the schools of the country.



MR. THOMAS CHARLES,
President, Thomas Charles Company, Chicago, Ill.

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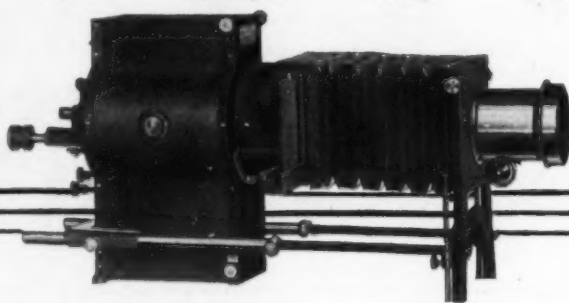
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School Board News

Credit for Home Work.

During the past school year the principal of the Nekoma School in Henry County, Ill., has awarded credits for various kinds of home work performed by the students. The plan is much the same as that outlined by the United States Bureau of Education and has met with much favor. The highest number of credits allowed for any one piece of work was 60, the lowest five and the average 20. A report of the credits for a period of eight weeks shows a total of nearly 64,000 and includes the following summary:

As a whole, outdoor work seemed much more in favor than indoor work. The girls evidently disliked bread-making and mending their own clothing; the boys did their full share of the chores and a number of them were also "mother's helper." Personal neatness and cleanliness at school showed a marked improvement in all reports following the first, until any digression from a perfect week's score was a rare exception in both boys' and girls' reports. The following is the list of credited home work: Washing and drying dishes; mending own clothing; ironing ten articles; making one bed; sweeping and dusting one room; making and baking bread; preparing a meal; churning; gathering eggs; milking a cow; feeding pigs; cleaning a horse; feeding one horse or cow; cleaning barn; carrying in a day's fuel; filling reservoir or tank; mowing lawn; in bed before nine p. m.; a bath; personal neatness and cleanliness at school; sleeping with windows open.

AMONG BOARDS OF EDUCATION.

After six months' consideration the school board of Cincinnati has inaugurated a new system of accounting for the school department. Springfield, Ill. Purchasing agent, William Snodgrass, has been granted an increase of \$20 making his monthly salary \$85.

Quincy, Ill. Clyde L. Sears has been reappointed as business manager of the schools with a salary of \$1,100 per year.

Moline, Ill. In connection with a new system of bookkeeping which has recently been put into operation by the school board, a form of inventory has been devised by which the several principals will be enabled to make a complete and accurate list of all school property, including furniture, books and supplies of all kinds. The property list will make possible a careful accounting of school property and will serve as a permanent appraisal of value for all school equipment owned by the schools.

The Dayton City Commission has recently appointed an advisory commission on public recreation consisting of fifteen members. The commission as organized represents the city, the board of education and the local Playgrounds and Gardens' Association with five persons for each of the three sections.

The New York City board of education has taken steps to organize a Bureau of Compulsory Education, School Census and Child Welfare in accordance with the provisions of a new statute, the Hoff law. A director will be appointed by the board of superintendents with a salary of not less than \$5,000 per year.

It is intended that the new bureau shall take over the work of the permanent census board and the compulsory education department formerly in charge of the associate superintendents of schools.

Minneapolis, Minn. The school board, upon the recommendation of the educational committee, has adopted plans for the establishment of an "opportunity" school for girls at the Bryn Mawr school building.

The school will be organized along the lines of the Arnold opportunity school for boys which seeks to obtain all the available data about the pupil and to fit him for the special place which he should fill. Handwork will form an important part of the work and special attention will be given to each individual pupil. A physician may be appointed later to make a study of the mental condition of some of the girls and to help the teachers thru suggestions relating to defects and their remedies.

Dixon, Ill. The school board has increased the tuition rates for non-residents as follows: High school, \$40.00; fourth to eighth grades, \$27.00; first to fourth grades, \$21.60. The increases were made after it had been shown that it costs \$42 per year to educate pupils in the high school and \$29 for those in the grades.

The school board of Harvard, Ill., has raised the tuition fees for the high school from \$30 to \$38 per year.

Everett, Mass. The position of chief of school repairs has been created.

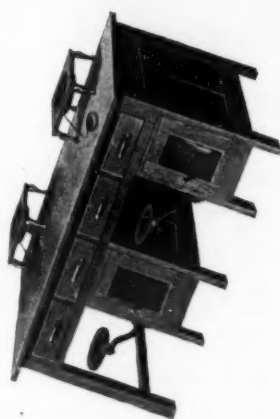
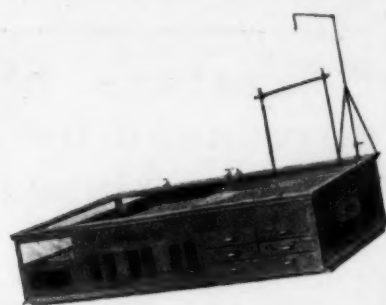
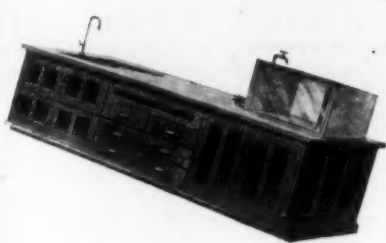
Joliet, Ill. The school board is considering the readoption of an old rule by which all expenditures of more than \$25 shall be endorsed by the full board in executive session.

Des Moines, Ia. Upon the recommendation of a member, the school board has adopted a rule providing for the appointment of a board consisting of the superintendent, supervisor of physical education, three high-school athletic directors, the president of the board and one member to have entire control of athletic affairs for the public schools.

Under the plan, the supervisor of physical education, is appointed chairman. The new board will take charge of all moneys received from athletic teams and associations. The centralization of athletic affairs in one board is the outcome of charges to the effect that pupils neglected their studies in favor of the athletic affairs and also that complaints had been received concerning the accounting of funds.

The school board of Taunton, Mass., has ordered the installation of a safe in the high school building to provide a place for school records and also to provide a depository where pupils may place their valuables during school hours. It is planned to provide envelopes with the names of the pupils upon them and to keep one of the teachers in attendance at stated times of the day.

The school board of Louisville, Ky., has adopted the policy of condemning property desired for public school sites and enlarging playgrounds, unless prices at which property now being offered are reduced. It has been the experience of the board that as soon as it becomes known the schools are in the market for building sites, the prices have immediately been



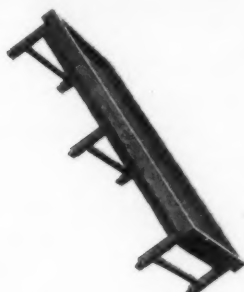
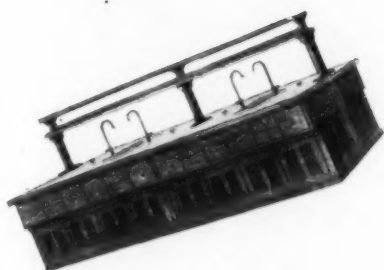
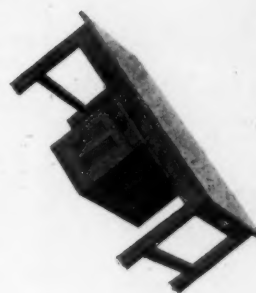
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raised, often doubled. For more than three months the board has sought suitable sites for schools but without avail.

Altoona, Pa. The school board has adopted a new policy for weighing coal received for the school buildings of the city. All coal will be weighed and the amounts tabulated daily. The district will make out its own bill using the weights on the school-district scales as a basis.

In calling for bids, it is provided that dealers shall give a complete analysis of the coal estimated on so as to insure the best coal at the cheapest rate. A six-ton Fairbanks scale has been erected on the high-school lot to be used for the weighing of coal.

Upon the recommendation of Wm. A. Stecher, director of physical education, six additional all-year playgrounds have been established, representing a total of twenty all-year playgrounds under supervision.

The school board of Pittsburgh, Pa., has adopted the policy of hiring directors of special subjects in the schools on a ten-months' basis with additional pay for services performed during the vacation months. Clerks will also be paid on this basis and services required beyond the regular school period will be paid for accordingly.

In making the rule, two exceptions were made in the cases of the Director of Special Schools and Extension work and the Director of School Gardens. These will be elected on the twelve-months' basis, the former to receive a salary of \$3,600 and the latter \$2,500.

A recent report of State Superintendent J. A. Churchill, of Oregon, shows that the high-school attendance thruout the state is remarkably high. Out of a total of 133,573 students, 14,821 are enrolled in the high-school classes. A little more than eleven per cent of pupils in the public schools are enrolled in the high schools. On the basis of twelve grades, it is estimated that if every pupil who entered the public school continued his education in the high school, there could be only 33 per cent of the enrollment in the latter.

State Superintendent Edward Hyatt of California has recently ruled that school teachers in the state cannot be deprived of their salaries because of enforced periods of idleness due to

the closing of schools by epidemics of disease.

Mankato, Minn. The school board has authorized the opening of a summer school for the benefit of pupils who have failed.

DEATH OF A. H. ANDREWS.

Alfred H. Andrews, a pioneer manufacturer of school furniture and supplies and founder of the firm which bears his name, died on June 10 at Lakeside Hospital, Milwaukee, after a long and severe illness.

A history of the origin and development of the school desk and supply industry in the United States cannot be written without a mention of the prominent part played by Mr. Andrews in originating new types of seats, improved erasers, etc. He was one of the earlier group of men to whom American schools owe much for the hygienic, graceful and economical character of the present-day seating.



A. H. ANDREWS
Died June 10, 1914

Mr. Andrews was born in New Britain, Conn., in 1837. His father and mother were people of broad culture of the old puritan type. After finishing high school, at the age of 18, he came west soliciting subscribers to a popular weekly magazine. His first connection with the school supply business dates about a year later, when he became identified with the sale of the Holbrook school apparatus. He began as clerk for G. & C. Sherwood, of Chicago, who were then the Western agents for D. Holbrook, manufacturer of school apparatus. During the early period, Mr. Andrews also sold the chair desk, then manufactured by Chase & Company, Buffalo, N. Y. Eight years later he formed a partnership with S. Bigelow, under the name of Andrews & Bigelow. Splendid management made the firm at once prosperous, and with a capital of \$4,000, the sales during the first year amounted to \$50,000. The firm soon changed to A. H. Andrews & Company.

Then came a series of splendid improvements in the design and construction of school desks. Mr. Andrews saw room for progress. He brought out the first hinge seat. He also designed and manufactured the first curved back and seat. To him is also due the first dovetailed wood and iron connections in school-desk construction. These improvements revolutionized the school-desk industry. Graceful form, beauty in finish and hygienic properties took the place of awkwardness.

In 1894 Merle & Heaney purchased a controlling interest in Mr. Andrews's company and reorganized it, retaining Mr. Andrews as president, which office he held until his death. For some years, however, his connection with the firm was nominal only and he was not responsible for its management.

Mr. Andrews was a modest, genial man whose equanimity of spirit and kindness made for him thousands of friends among the school-board officers and superintendents of the country. During the many years of prosperity and the later years of financial distress following the panic of 1893 and the subsequent formation of the school furniture combine, he retained a cheerful, optimistic outlook on life. His contribution to school progress was very real and has not been equalled by any of his contemporaries or successors.



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CHICAGO, ILL.



Upon the recommendation of Supt. S. O. Hartwell, the school board of Kalamazoo, Mich., has adopted the six-and-six plan for the schools. The tenth grade students will be transferred to the Central High School and the seventh and eighth grades will be concentrated in the two departmental buildings. Under the new arrangement, students of the eighth grades will be given a chance to differentiate along special lines such as Latin or German, business subjects, manual training, including cabinetmaking, advanced carpentry and mechanical drawing for boys and cooking and sewing for girls.

For the lower grades, a modified form of the Gary system will be tried out and an effort made to adapt it to the general administration method. The girls' vocational school, so far as the same can be accommodated, will be placed in the high school building.

Detroit, Mich. One of the unique commencement entertainments arranged by the members of the junior class was a luncheon served in the school gymnasium in Indian style. The waiters were dressed in Indian costumes and the menus were printed in the Chippewa tongue which is spoken on the White Earth Indian Reservation, just north of the city.

The school board of Greencastle, Ind., is preparing plans for the erection of a Junior High School to accommodate the pupils of the seventh and eighth grades and the freshmen class of the high school. The building will contain a gymnasium and auditorium and will have provision for the teaching of manual training and domestic science.

New Britain, Conn. A proposed change in the rules of the board provides for a lengthening of the school sessions as follows: *High School*—forenoon, 8:30 to 12:45 p. m.; afternoon, 1:15 to 5:15 p. m.

Grades seven and eight—forenoon, 8:40 to 11:40 a. m.; afternoon, 1:30 to 4:30 p. m.

Below grade seven—forenoon, 8:40 to 11:40 a. m. and 1:30 to 3:30 p. m.

The lengthening of the high-school sessions was recommended to enable the faculty to make the periods 40 minutes net, with three minutes for relaxation and passive between periods.

Rock Island, Ill. Following a trial of the departmental idea in one of the grade buildings, the school board has undertaken the arrangement of a system by which the departmental idea may be successfully extended to all the pupils in these grades of the schools.

The school board of Denver, Colo., has abolished the teaching of sex hygiene and dropped the instructor from the school faculty.

Clinton, Mass. Supt. F. E. Clark has made arrangements for the inauguration of a school for backward children with special instruction suited to their particular needs.

The committee on elementary schools of the Philadelphia board of education has added four new evening schools to the list for the ensuing year, including three for elementary classes and one for high schools.

Atchison, Kans. A new department is to be created in the city schools with the appointment of an instructor for deaf and dumb children.

After a meeting covering three days, the four supervisors of agricultural education of the state of Ohio adopted rules and regulations for the standardization of elementary schools to be established under the new school code.

It is provided under the code that the supervisors are to assist the state superintendent in the work. Each supervisor is in charge of one of the four districts of the state. First-grade, one-room rural elementary schools will receive \$25 per year; second-grade two-room consolidated elementary schools of first-class, \$100.

Pittsburgh, Pa. The finance committee of the board of education has recommended a revised schedule of salaries for the assistant superintendents by which it is proposed to pay Assistant Superintendents Samuel Andrews and John Morrow, \$3,000 and \$1,000 a year less, respectively.

Raises of \$500 each will be made in the cases of Assistants R. M. Sherrard and S. S. Baker.

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Associate Superintendent C. H. Garwood and the four district superintendents will each receive \$4,000 per year.

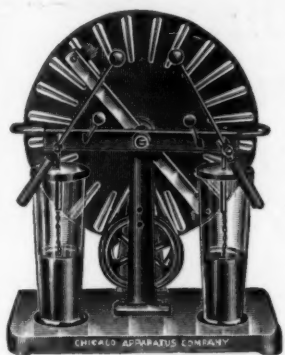
District Superintendent of Schools Charles S. Foor recently instructed the teachers of the school district of the city of Reading, Pa., to have all pupils in the public schools at 11:00 a. m., Monday, June 15, 1914, rise and, after a moment of silence, repeat the following simple pledge to the flag. "I pledge allegiance to my flag and the republic for which it stands—one nation, indivisible, with liberty and justice for all." He also suggests that every person in the city at this hour pause a moment, and silently repeat this pledge, believing that the thought of peace and good-will for the nation will be more effective than more demonstrative exercises.

Benton Harbor, Mich. Supt. Wm. R. Wright has resigned after nine years of service. The board in accepting the resignation, recognized his efficient services and also tendered him the sum of \$200 in payment of his services during the summer months of eight of his nine-year term.

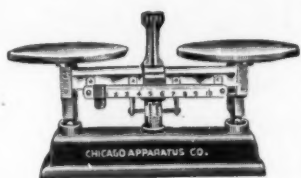
The school board of Columbus, O., has abolished the position of assistant superintendent of schools and has created two new offices to be known as "supervisors of grades and high schools." The former has been filled with the appointment of R. C. Kinkead, formerly assistant superintendent, with a salary of \$2,500 per year. Miss Marié Cugel, instructor in mathematics in the high school at Toledo, has been appointed to the latter with a salary of \$2,000 per year.

Austin, Tex. Summer schools at the grade and high schools have been opened for a six weeks' period. Manual Training, Domestic Science and Commercial studies, as well as the literary courses, are offered.

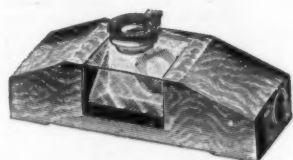
McMinnville, Ore. A Junior High School will be opened with Frank A. Scofield, of Palo Alto, in charge. Mr. Scofield has completed a course at Stanford University and has taken special work in connection with the study of Junior High Schools in which he has been especially interested.



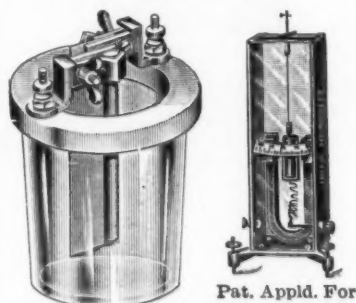
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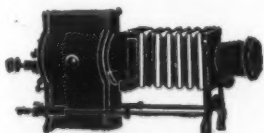
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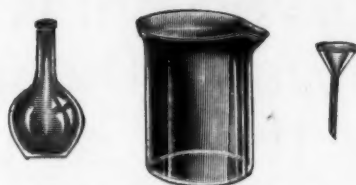
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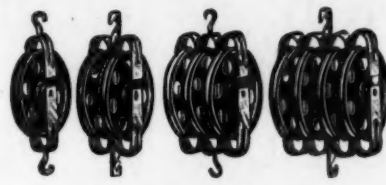
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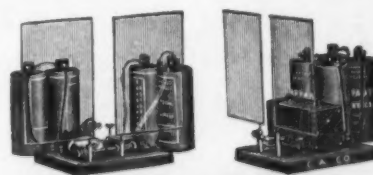
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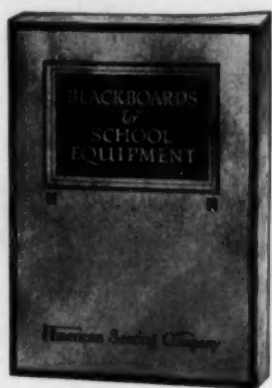
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PERSONAL NEWS OF SUPERINTENDENTS

A beautiful expression of the love and respect of the citizens of Minneapolis for Dr. C. M. Jordan was shown on June 6th in a reception tendered at the Adams School to mark the close of his 33 years of service in the city. More than eight hundred men and women, former pupils of the school over which Dr. Jordan presided in 1880, teachers and friends gathered to pay their respects.

The climax of the evening's addresses and music was the presentation of an electric automobile by a committee of teachers. The actual donors of the machine remained anonymous. A garage for the machine has been planned and built by the teachers of the Manual Training Department of the schools.

John N. Davis, aged 48 years, superintendent of schools in Menominee, Mich., died June 1, after an operation for appendicitis. Mr. Davis's death ended one of the most acrimonious fights for the prerogatives of a superintendent which has occurred in years in the Middle West.

Mr. N. M. Williams, formerly superintendent of schools at Memphis, Tenn., has been appointed advisor to the superintendent-elect, A. A. Kincannon.

Westfield, Mass. Mr. Charles E. Fisher, of the Normal School faculty at Providence, has been elected superintendent to succeed J. A. Mac Dougal, resigned.

Owensboro, Ky. Supt. James H. Risley has been re-elected.

Temple, Tex. Mr. W. W. Clement, principal of the high school, has been elected superintendent of schools to succeed J. Kimball, resigned. Mr. Clement will receive a salary of \$2,100.

Petersburg, Va. Supt. R. Randolph Jones has resigned.

Ely, Minn. W. E. England of Aurora, has been elected superintendent of schools to succeed

Stanley Adkins who resigned to take a similar position at Blue Earth.

Mr. H. A. Keeley, superintendent of schools at Brush, Colo., has resigned to accept the principalship of the high school at Trinidad. Mr. Keeley will be succeeded by Mr. H. G. Nelson formerly assistant superintendent of the Brush public schools.

Mr. A. S. Hurt, head of the public schools of Clarence, Mo., has been elected superintendent at Greenfield, Mo., at an increased salary.

Grand Rapids, Mich. Mr. Paul C. Stetson of the Junior High School, has been appointed principal of the new South High School.

Professor Thomas H. MacBride was, on June 5th, appointed president of the University of Iowa by the State Board of Education. Professor MacBride has been acting president.

George J. Dann, who for several years has been superintendent of the public schools of Oneonta, N. Y., on June 10th, at the annual commencement exercises of New York University, was honored with the degree of Doctor of Pedagogy by the School of Pedagogy of the University. Mr. Dann is a graduate of Union University and holds the degree of Master of Pedagogy conferred by the New York University in 1910.

Mr. B. L. Jones, for the past ten years superintendent of schools at Laurens, S. C., has resigned.

Allentown, Pa. Supt. F. D. Raub has been re-elected for his eighth term.

Norristown, Pa. Supt. A. S. Martin has been re-elected at a salary of \$2,600 per year.

Bethlehem, Pa. Mr. W. C. Cleaver, of Cheltenham, has been elected superintendent at a salary of \$2,600.

Carlisle, Pa. Supt. J. O. Wagner has been re-elected.

Manhattan, Kans. Supt. J. J. Haney has been re-elected.

Elgin, Ill. Supt. R. I. White has been re-elected at an increased salary of \$3,300.

Marquette, Mich. Mr. A. R. Watson has been elected superintendent of schools at a salary of \$2,000 per year.

Supt. S. K. Mardis has been re-elected at Wellsburg, W. Va., at a salary of \$2,000 per year.

F. E. Palmer, of LeMars, Ia., has been elected superintendent of schools at Mason City with a salary of \$2,200.

S. T. Neveln, for five years superintendent of schools of Storm Lake, Ia., has resigned to accept a similar position at LeMars.

Homestead, Pa. Supt. Landis Tanger has been re-elected with a salary of \$2,400 per year.

Mr. E. T. Duffield, of Chehalis, Wash., has been elected superintendent of schools at Ironwood, Mich., at a salary of \$2,750.

Supt. Ernest L. Thurston of Washington, D. C., has been re-elected for a three-year term.

Mr. W. A. Kreider of Birdsboro, Pa., has been elected superintendent of schools at Darby.

Mr. M. H. Moore, formerly principal of the North Side High School, Fort Worth, Tex., has been appointed to the new position of assistant superintendent of schools, created at the June meeting of the board.

San Antonio, Tex. Supt. Charles J. Lukin has been re-elected.

Twin Falls, Ida. H. G. Blue of Burley has been elected superintendent of schools to succeed O. M. Elliott who resigned to accept a similar position at Salem, Ore.

Supt. Geo. L. Farley has been re-elected for his fourth term as head of the schools of Brockton, Mass.

Hartford, Conn. Thos. S. Weaver has been unanimously re-elected superintendent of schools for his fourteenth term.

Supt. G. D. Smith of Fond du Lac, Wis., has resigned.

Faribault, Minn. Supt. John Monroe has been re-elected for a three-year term.

George E. Ganiard of East Jordan, Mich., has been elected superintendent of schools at Mt. Pleasant for the ensuing year.

Rutland, Vt. David B. Locke has been re-elected at a salary of \$2,400.

Champaign, Ill. Supt. W. W. Earnest has been re-elected.

Austin, Tex. The position of director of physical training and supervisor of playgrounds has been created with the appointment of Mr. Berry Whitaker. The director will have assistants at the several schools so that all will have adequate supervision of sports.



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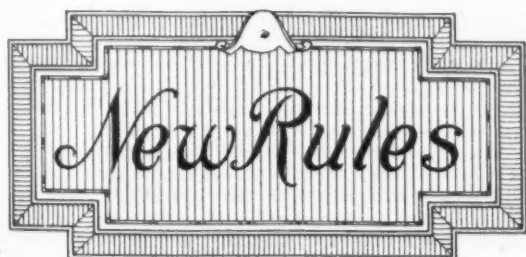
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Salary Rules.

The school board of Alliance, O., has amended the rules governing the professional requirements and salaries of teachers. They are as follows:

1. There shall be a minimum and maximum salary based upon professional improvement, to-wit: inexperienced grade teachers shall begin at the minimum salary of \$400 a year and shall be advanced, if work is satisfactory, \$50 a year until they have reached the maximum salary of \$600 a year allowed on experience.

2. There shall be a maximum salary of \$800 a year based on professional improvement consisting of academic preparation, loyalty and enthusiasm, spirit of co-operation, the study of books pertaining to education, literature, history, science or any line of recognized collegiate or normal school work, or such other activity as may be approved by the superintendent of schools.

3. Adequate recognition in addition to the above may be given for increasing efficiency and professional advancement as indicated.

4. All work in the way of above improvement for which recognition will be given must have been approved by the superintendent of schools before such recognition is asked.

High Schools.

1. The minimum salary for teachers of the high school shall not be less than \$700 a year. High-school teachers shall be advanced on experience \$50 a year until they reach the maximum salary allowed on experience which shall be \$1,000 a year.

2. All increases in salary beyond \$1,000 a year shall be based upon graduate work, eminent qualifications, or such other advancement as the superintendent of schools may approve.

3. In addition to the provisions adequate recognition may be given for loyalty and enthusiasm, spirit of co-operation, increasing efficiency along special lines of work by attendance at summer university courses or by such other study or work as may be approved by the superintendent of schools.

Control of Playgrounds.

At a conference, during the month of May, between members of the Boston school committee, the Park and Recreation Commission of that city, the following plan of co-operation for the conduct and control of playgrounds was agreed upon:

1. The school committee is to appoint and pay for the services of all play-teachers employed in children's corners; all play-teachers assigned to the conduct of athletics for elementary school pupils; and those play-teachers whose services are limited to school children using the playgrounds at specified times during the year.

2. The school committee will furnish the necessary play material used in the children's corners and on the athletic fields, such as baseballs, bats, masks, footballs, bean-bags, bean-bag boards, ringtoss, etc. It will also pay the Park and Recreation Commission for any apparatus and equipment used in school-yard playgrounds and for the repair of the same, provided all such apparatus, equipment, and repair are furnished upon requisition signed by the Director of School Hygiene or the Assistant Director of Athletics.

3. The school committee shall have the use and control of children's corners on parks and of the athletic fields on parks during such periods of the year as may be mutually agreed upon; provided, however, that this use and control of athletic fields by the School Committee shall not apply to Saturday afternoons nor beyond six o'clock, P. M., daily, nor to holidays.

4. The Park and Recreation Commission shall control all park playgrounds, children's corners, gymnasia, buildings, and baths, and shall furnish, install, and keep in repair the necessary apparatus for the same. It shall also have control over all laborers, foremen, and matrons appointed by said commission to care for grounds, gymnasia, buildings, and baths, and shall pay for the services of such employees. It shall also

pay for the services of play-teachers which it may engage for the different playgrounds.

5. The supervision of playgrounds and the control of athletics, games and plays, on park playgrounds shall be under the combined authority of the representatives of the Park and Recreation Commission and of the school committee.

6. The play-teachers, appointed by and paid for by the school committee, shall be vested with the authority of both the Park and Recreation Commission and the school committee in the conduct and control by them of athletics on the park playgrounds.

High-School Functions.

Goshen, Ind. A committee composed of representative members of the high-school faculty and parents of students of the junior and senior classes was recently appointed to draw up rules for the guidance of all school functions. The rules read:

1. All parties shall be subject to the direct supervision, control, and chaperonage of the faculty and a committee of parents. Every person attending the party thereby voluntarily places himself under such control during the life of the party.

2. All parties shall end at twelve o'clock midnight; except that the committee may, for final senior parties, extend this time to one o'clock.

3. All dances shall be waltzes or two steps, or such other dances as the committee may allow.

4. The use of tobacco within the halls, ante-rooms or exits, is forbidden.

5. All parties shall be informal.

6. All refreshments shall be served in the hall either before or during the course of the party.

7. It shall be the duty of the presidents of the respective classes or of a committee delegated by them and responsible, thru them to the committee, to see that every class member be invited; furthermore, that company to and from the place where the party is held be arranged for everyone wishing to attend; and furthermore, that suitable entertainment, if necessary, other than dancing and cards be provided for those members who do not indulge in either of these amusements.



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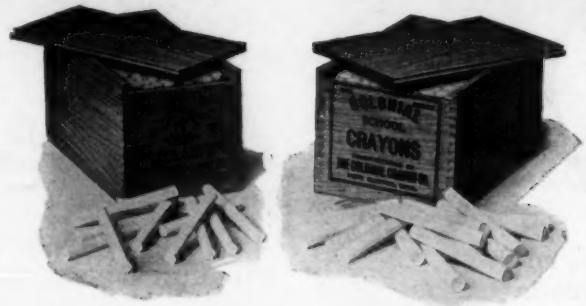
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8. There shall be no drives, and no extended walks during the hours of the party.

The committee strongly advises and urges the following:

a. That there be no visiting of cafes after the party is ended.

b. That there be no flowers except for general decoration, and except in case of rain or snow, no carriages.

c. That the trend of the parties be toward simplicity, especially in dress and refreshments.

d. That when, due to uneven numbers of boys and girls, it is for the success of the party necessary or advisable to invite persons other than high-school students, there be invited only Goshen young men and women, preferably Goshen high school alumni.

e. That every parent who has a son or daughter attending these functions read these rules carefully and co-operate with the committee in making the high-school parties sensible entertainments.

RULES AND REGULATIONS.

Dubuque, Ia. The school board has adopted a resolution abolishing sororities and fraternities from the high school. Written pledges will be exacted of all students entering the high school in September to the effect that they will not become members of such organizations.

Philadelphia, Pa. The school board has passed a set of rules for the administration of the schools. The rule applying to the employment of married women teachers has been amended to read as follows:

No married woman shall be appointed to any position under The Board of Public Education unless her husband shall be unable, from physical or mental disease, to earn a livelihood, or shall have abandoned her for a continuous period of not less than one year prior to the date of her appointment, or who has been living separate and apart from her husband, under the terms of an agreement of separation for a continuous period of not less than one year. Satisfactory proof of such physical or mental disability, abandonment or separation shall, in all cases, be furnished prior to an appointment.

In case of the marriage of a woman holding any position under The Board of Public Education, such position shall at once become vacant;

but this provision shall not apply to a married woman who now holds any such position.

An amendment has also been made to the rule governing the organization of schools to read as follows:

No elementary school shall be placed or continued in charge of a supervising principal, unless the number of divisions shall exceed nine.

Each room in regular use for instruction by a kindergarten, grade, cooking or shop work teacher shall be counted as one division, except that two single session kindergartens shall not count for more than one division.

Except by the affirmative vote of two-thirds of the entire board, the number of heads of departments in any high school shall not exceed six.

Departments shall not be established, nor shall those now existing be continued, unless there shall be not less than four persons giving their entire time to instruction in the study or studies forming the special line of work of a proposed or an existing department.

Upon the recommendation of Supt. Ella F. Young, the Chicago board of education has adopted a rule requiring that "a fee of one dollar shall be required of each applicant for evening high-school work. This fee will be refunded during the last week of the evening school year to all students who have attended three-fourths of the total number of nights, and whose conduct has been satisfactory. In exceptional cases, this fee may, on the recommendation of the principal, be remitted by the superintendent of schools. The fees forfeited by students will be placed in a contingent fund and credited to the respective schools in which they were collected."

Washington, D. C. An amendment to the rule governing the marriage of female teachers has been presented to the school board for approval. It reads: "Should a female teacher marry, her place shall thereupon become vacant; provided, however, that when the marriage does not take place after the last regular school day in June, she shall be paid her full salary for June; and to provide further, that no teacher thus removed from the school rolls shall be permitted to take the examinations for replacement in an eligible list that might lead to her reappointment under one year from the date of her marriage."

A new policy adopted by the school board of

Portland, Ore., is intended to bar from the teaching service married women who have husbands capable of supporting them. An exception is provided in the case of widows and women with crippled husbands which applies, however, upon the re-marriage of such teachers.

The new rule affects six teachers who had previously been recommended by Supt. L. R. Alderman and there is considerable doubt on the part of educators as to the right of the school board to refuse to re-elect these instructors since the state law provides the notices shall be issued to teachers informing them of their failure to be re-elected.

Ottumwa, Ia. The school board has adopted a new rule governing the pay of teachers who are absent thru sickness. The rule provides that teachers absent on account of personal illness will receive one-half pay for time lost, not to exceed ten days in a school year. If absent a longer time, they will lose the full pay.

A new rule is under consideration by the Boston school committee which provides that no dancing shall be permitted at high-school cadet officers' parties, school or class parties, particularly in high-school buildings or elsewhere under the authority of head masters or teachers of such schools; and no permit to hold such parties will be issued by the secretary except on application of the head master provided that this order does not affect parties for which applications have been filed.

Brockton, Mass. The school board has recently decided to continue the one-session system at the high-school building. The members have also expressed their desire to include the ninth grades in the new high school building at its completion.

Chicago, Ill. The school board has ordered the appointment of "deans for boys" for the several high schools of the city. The men appointed will act as advisers to the boys in choosing studies, in adjusting difficulties and in directing social and athletic activities.

Auburn, N. Y. The salaries of grade teachers have been raised \$40 per year and in the grammar and high schools \$50 for women and \$100 for men. The maximum salary has been raised from \$650 to \$690.



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SUMMER SCHOOLS.

Bayonne, Mich. Five summer schools will be opened with special classes for pupils who have failed of promotion.

Supt. Ella F. Young of Chicago, in a report to the school board, made the statement that the summer high schools are proving valuable to students desiring to reduce the length of time spent in taking the four years' course. Supt. Young is of the opinion that the usual summer term is too short in which to accomplish a semester's work and for that reason has recommended that the term be extended from seven to eight weeks, beginning June 29, 1914. A tuition fee of \$2 per week has also been recommended.

Memphis, Tenn. A summer school of six weeks has been provided for backward students.

Peoria, Ill. A six weeks' summer school has been opened in the Manual Training School Building. Sessions are held from 8:30 to 11:30 a. m., and instruction is given in bookkeeping, accounting, penmanship, shorthand and typewriting, manual training, mechanical drawing and sewing.

Westfield, N. J. A four weeks' summer school has been opened for the benefit of pupils who have failed of promotion.

Terre Haute, Ind. The school board has voted to establish summer grade and high schools for the benefit of pupils who have failed of promotion or who wish to take advanced work.

Louisville, Ky. Provision has been made for the establishment of two elementary summer schools and one high school.

South Bend, Ind. A summer school for the benefit of delinquent students and for those wishing to make up work has been established in the high school. Courses in required subjects will be offered as well as in a number of elective subjects. The school will continue for a period of eight weeks.

Chicago, Ill. Summer high schools have been opened for a period of eight weeks. Vacation schools for elementary pupils opened on July 6 for a period of six weeks.

Birmingham, Ala. A summer school for teachers has been established at the Central High School to continue for a period of six weeks.

Classes have been arranged for rapid reviews of the subjects required for the several classes of state teachers' certificates. In addition, work will be offered in special topics such as music, manual arts, sewing, cooking and physical culture.

Instruction will be given in the following subjects: Arithmetic, algebra, geometry, English grammar, composition, literature, geography, agriculture, physiology, physics, Alabama history, United States history, civics, school laws of Alabama, theory and practice of teaching, physiology, vocal music, drawing, manual training and domestic science.

Toledo, O. Summer schools for the benefit of pupils who have failed in school work have been opened at the East Side Central School and the Jefferson School.

Evanston, Ill. A summer school has been opened at the Central School for a period of six weeks. Courses are opened to boys and girls and include elementary woodwork, furniture making, mechanical drawing and metal work. The tuition fee is \$5 and students must furnish their own material.

Oklahoma City, Okla. The school board has opened a six-weeks' summer school for the benefit of grade pupils who have failed in their work of the school year. Sessions are from eight to twelve and the tuition has been fixed at \$7.50 for the term.

Petoskey, Mich. A summer school has been opened for the first time. Outdoor sessions will be held and regular gymnasium work will be included in the instruction. A nominal tuition fee will be required.

Topeka, Kans. Summer classes for children wishing to make up work have been opened at four of the school buildings. There will also be classes for advanced students continuing for a period of eight weeks.

Osage City, Kans. A summer school has been opened with decided success.

Dallas, Tex. A summer school has opened for a period of eight weeks. The sessions are held from eight to one with a ten-minute intermission after each hour.

Coldwater, Mich. An eight weeks' summer school has been opened. Instruction is given in arithmetic, spelling, geography, language and

grammar, writing and reading. The tuition has been fixed at \$3.00.

Freeport, Ill. Upon the recommendation of Supt. S. E. Raines, the school board has ordered that a summer school be opened for a period of five weeks. It is provided that pupils of the four highest grades shall be eligible to the classes and that they shall be received only upon the recommendations of the respective principals. Attendance is voluntary but all students who enroll will be expected to complete the prescribed work. Instruction is provided in subjects for the benefit of the individual students who are weak.

The purposes of the summer school, as outlined by the school authorities are: (1) To give a chance for pupils who have been sick or who have met with misfortune, and who are nearly ready to make their grade, to get enough additional training to do so.

(2) To give pupils who are somewhat slow in their work and who on account of their age really ought to advance an opportunity to get additional work.

(3) To give pupils a chance for special help, who tho promoted, have advanced by such a close margin that the probabilities are that they will fall in the next grade unless some review work is provided.

(4) To do away with individual miscellaneous tutoring as much as possible and bring the summer work under the control of the regular school system.

The state board of education has no power to order the study of the Bible as a textbook, in Indiana public high schools, according to a recent opinion of Attorney General T. M. Honan to Charles A. Greathouse, state superintendent of schools. The decision will take from the state any further consideration of the question of Bible study in public schools but leaves the individual pupils free to take the study outside of the regular schools. It has been pointed out, in the opinion, that the state board cannot give credit for work done outside the schools in this subject, unless it is taken in a private school which has the rating of a commissioned high school.

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TEACHERS' SALARIES.

Superior, Wis. The school board has raised the maximum salary for grade teachers from \$820 to \$900 per year. All instructors at present receiving the maximum salary have been granted increases of \$40 per year and those receiving less than the maximum, \$60 per year.

East St. Louis, Ill. The school board has revised its salary schedule so that teachers will receive \$450 for the first year and increases of \$50 per annum until the maximum of \$900 is reached in the tenth year.

Teachers desiring advancement in salary to the maximum regular salary shall present a certificate that they have attended regularly and successfully completed within the past five years one or more full regular summer courses embracing the minimum amount of work outlined for regular students, in some recognized university, college or normal school.

Providing further that any teacher who has been advanced to the former \$80 maximum salary, or may at this time according to length of service be eligible to advancement to the former \$80 maximum salary, shall not be advanced according to this salary schedule, without first meeting the requirements stipulated above.

Terre Haute, Ind. Upon the recommendation of Supt. C. J. Waits, the school board has adopted a new salary schedule by which most of the instructors will receive increases of \$25 instead of \$40 as provided for in the former rules.

Under the new schedule, grade teachers will begin with a salary of \$500 the first year, and will receive increases of \$50 each year until the maximum of \$750 is reached.

A radical change in the rating of grade principals has been made by which the salaries are based on the number of pupils in the building. Principals of schools of less than 100 pupils are paid salaries ranging in accordance with the number of years of experience, from \$700 to \$950 per year; principals of schools with 100 to 250 pupils receive salaries ranging from \$800 to \$1,050 per year, according to their experience; 251 to 400 pupils, \$900 to \$1,150; 401 to 550 pupils, \$950 to \$1,200; 551 pupils or more, \$1,000 to \$1,250.

High-school principals and the vocational director are to receive salaries ranging from \$1,500

to \$2,000, the latter being given to instructors with six years' experience in either of these positions. High-school assistants and manual training teachers begin at \$750 per year and receive increases of \$50 each year until a maximum of \$1,000 is reached. Supervisors begin at \$1,000 per year and receive increases of \$50 per year until the maximum of \$1,250 is reached.

Indianapolis, Ind. A general increase of \$25 to \$50 per year in the maximum salaries for grade teachers, German teachers and assistant principals has been granted by the school board.

Louisville, Ky. The salaries of 105 teachers in the public schools have been raised from \$55 to \$60 per month. The remaining 245 have been awarded increases of \$5 per month for special merit.

The school board of Springfield, Ill., has raised the maximum salaries of teachers according to the following schedule: First year, \$450; second year, \$500; third year, \$550; fourth year, \$600; fifth year, \$700; sixth year, \$800. The maximum salaries of the ensuing year will be increased, on the basis of efficiency, to \$850 per year.

Winchester, Mass. To enable the teachers to obtain the benefits of the state pension law, the maximum salaries of teachers are as follows: Kindergartens, \$650; first to sixth grades, \$750; seventh and eighth grades, \$800; high school, \$950.

TEACHERS AND SCHOOL ADMINISTRATION.

The school board of Rutland, Vt., has abolished the automatic increase system of remuneration for teachers which has been replaced by the plan which allows each grade teacher now employed increases of \$25 per year and during ensuing years increased salaries based on merit. Grade teachers, who by reason of the time served are entitled to automatic increases, at the close of the school year were given these, in addition to the sum of \$25. Those who in succeeding years, would have received increases for ten or more years of service, will receive these according to the service rendered. The increases will be given only upon the recommendation of the superintendent or of the board of education.

According to the members, the new system is not faultless, but may be so remodeled that it will prove more serviceable than a complete change.

The California State Board of Education, in a resolution passed recently, has directed that women working in the same capacity as men, especially in the line of teaching, shall be paid the same salaries.

The California State Board of Education has raised the requirements for certification of high-school instructors to provide for fifteen pedagogical units of university study instead of twelve. The regular five years of university work is to be continued.

Denver, Colo. The school board has passed a rule by which the marriage of any teacher during the term of employment is to be considered as equivalent to resignation.

The school board of Joliet, Ill., has adopted rules governing the requirements and salaries of teachers. They are as follows:

Graduates from an approved two-year course may enter the third year of the trial period at an initial salary of \$500.

Trial teachers shall receive \$400 to \$500 per school year; regular teachers, \$550 to \$700; professionals, from \$750 to \$900.

Experience in rural schools is to be discounted one-half; in graded schools, one-third. In no case shall the first year's salary exceed \$700.

Manual training and domestic science salaries shall be: Minimum \$600; maximum, \$1,000. Annual increases for this department shall be limited to \$100.

In the matter of salaries, these heads of departments will be classed as supervisors. The salaries will be limited to a maximum of \$1,700, and the annual increase, \$100.

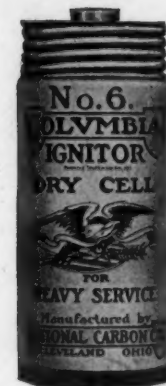
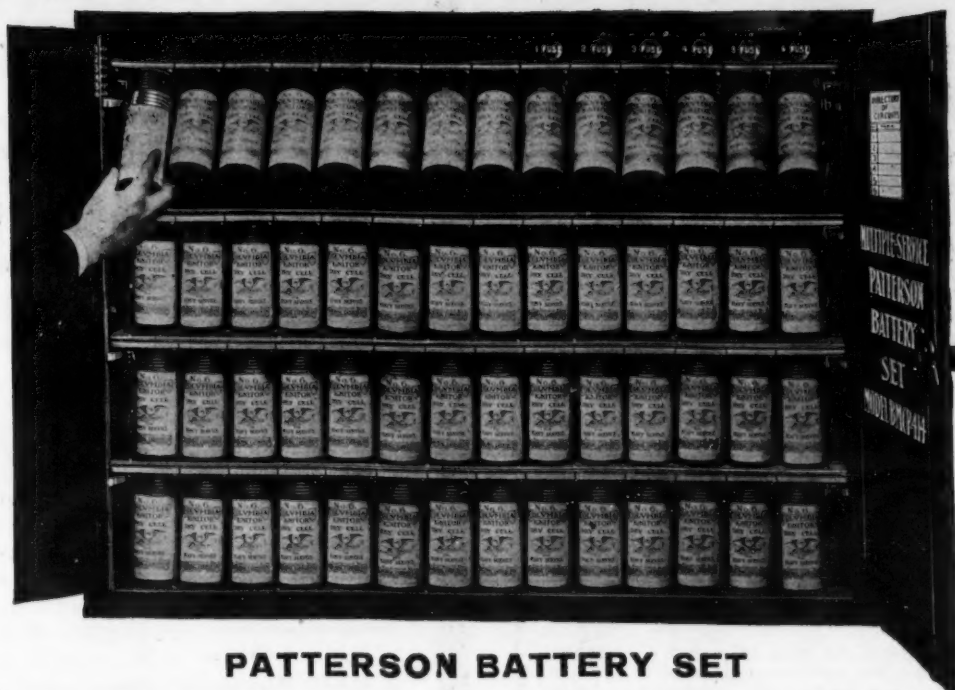
Decatur, Ill. Teachers in the public schools who contemplate signing contract for the ensuing school year have been notified that they will be expected to forego matrimony until after the school year has closed. The new ruling has been made to overcome a condition which arose a number of times during the past year when teachers resigned to become married.

Beaver, Pa. Supt. J. B. Craig has been unanimously re-elected as head of the public schools at a salary of \$2,400 per year.

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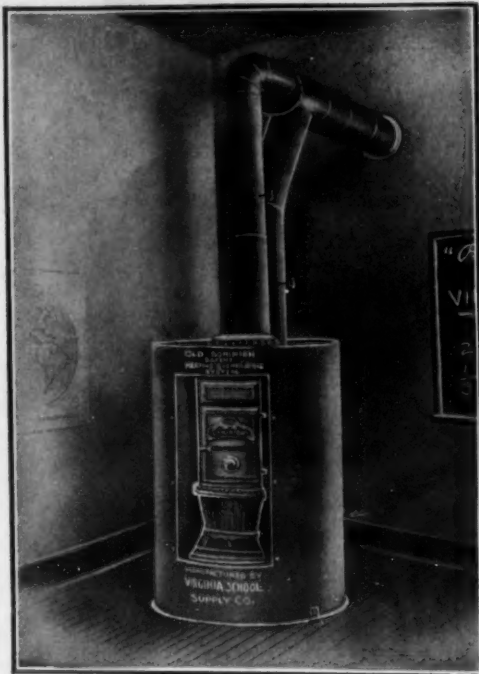
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It draws the foul or vitiated air from the floor of room by a syphon suction combined with the heater; no other system can do or does do this.

It is the cheapest of all heating and ventilating systems, because it combines heater, ventilating drum, ventilating mat, stove pipe and foul air pipe or duct. Pipe furnished free five feet from center of heater. All other systems require expensive independent foul air flues or ducts, either metal, brick or stone.

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School Administration.

Junior High Schools in Boston.

Junior High Schools will be an integral part of the Boston school system in September next. The schools, which will accommodate the seventh and eighth grades of several of the grammar schools and the ninth grade of the high schools, foreshadow a general reorganization of the Boston schools according to the six-three-and-three plan.

The Junior High Schools are being planned partly because Supt. Dyer and his associates feel the necessity of a system of schools to bridge the gap between the elementary and the high schools and partly to relieve a lack of accommodations. It is believed that by concentrating the seventh and eighth grades, the number of teachers and classrooms can be materially reduced and by withdrawing all freshman classes from several high schools, more accommodations will be obtainable for the second, third and fourth years.

Assistant Superintendent J. E. Burke, who has been placed in charge of the Junior High Schools, says of them: "It is confidently expected that the establishment of these schools will result in economy of time and effort on the part of the pupils by making the work thruout more harmonious and more directly related to their particular needs. It is believed that pupils who pass thru the Junior High Schools will be safe from the dangers that now confront them in the first year of high-school work, and having successfully passed on to the second year will be impelled to pursue their studies still farther and thus the records of high-school students will be mercifully reduced."

One of the practical results of the establishment of District Junior High Schools will be the relief afforded the congested condition of several high schools. If this newer type of

school is constructed a financial saving will be affected since Junior High Schools need not be so ornate or so expensively equipped.

Cost of Country Schools.

An interesting comparison of three types of country schools in Illinois has recently been printed by the State Department of Education of Illinois. It shows conclusively that excellent schools cost no more than average or poor schools in the experience of typical Illinois school districts.

The statistics show that in 30 poor schools the attendance was 1,444 days for an average enrollment of seventeen children during a school term of 140 days. The amount paid to teachers was \$261 and the total current expenses \$321.30. The average cost, per pupil, was \$18.68. The value of school property was \$634 and the total school levy \$330 compared to a possible levy of \$722.

The medium schools had an average enrollment of 29 children, an average term of 158 days and a total days' attendance of 3,078. The salary paid teachers was \$380.90 and the total current expenses were \$486.14. The district's levying tax was \$477 of a possible \$196.

In the types of good schools, the average enrollment was 36 children who attended for a term of 161 days and a total of 3,884 days. The amount paid to the teacher was \$485.65 and the total current expenses were \$674.64. The schools' levy was \$696 of a possible \$1,548.

The interesting point in the statistics is, however, the fact that while the poor school cost 22 cents per day, per pupil, the average school cost only fifteen cents and the good school seventeen cents. The average cost, per pupil, enrolled during the year, was \$18.68 for the poor school, \$16.48 for the average school and \$18.80 for the good school.

SCHOOL ADMINISTRATION NEWS.

Kewanee, Ill. The school board has adopted a plan by which a year of normal school will be added to the local high school. The course is open to graduates of the school or those who have had equivalent training. Persons who are not graduates may be admitted to the course by special arrangement. To supplement the textbook work of the students actual classroom practice will be provided for those who are considered competent to act as substitutes. The Western State Normal of Illinois will give credit to all students who successfully complete the high-school teachers' training course and get the diploma.

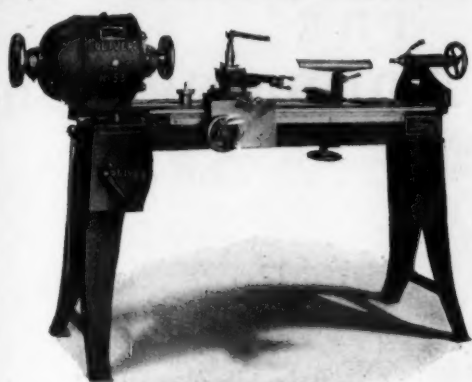
Moline, Ill. Upon the recommendation of Supt. C. H. Maxson, the school board has added a commercial business course in the high school, including stenography, typewriting, business English, accounting, commercial law and commercial arithmetic.

Covington, Ky. With the opening of the fall term of schools, the Junior High School plan will be put into operation by the concentration of all the students of the seventh and eighth grades at the Fourth District School and the Latonia School. The latter has already been placed on the departmental plan and will constitute the Junior High School Annex.

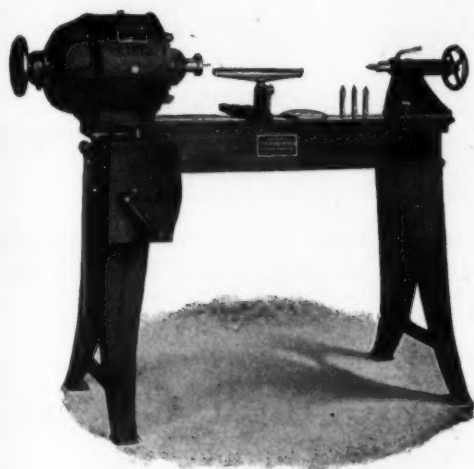
The change in organization will make it necessary for the teachers of these grades to undertake special courses of study making them competent to teach specified branches of the course. Recitations will be conducted similar to regular high schools, the students moving from room to room for each subject in turn. The hours for the Junior High School have been fixed at 8:30 for the opening session and 2:30 for the closing session with 25 minutes' noon intermission for lunch.

It is the purpose of the school authorities to provide opportunities whereby the students will be able to choose certain branches aside from the regularly prescribed course, affording an opportunity for deciding upon some line of work at an early age. German will be made a part of the course and will represent the first of a six-year high-school course in good German instruction.

The Junior High School will practically occupy the whole of the designated building with



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the exception of the kindergarten and the first grade. The present principal will remain in charge of the building while those in the other schools will become teaching principals in place of supervising principals. The supervising work will be centralized in Superintendent of Schools H. O. Sluss.

Under the terms of the new teachers' pension act of Massachusetts, which was passed last year, 188 veteran teachers from all parts of the state were retired on July first.

The pension bill provides that teachers may retire on a pension at the age of 60 years, but it specifically requires that they retire when they have reached the age of 70 years.

The veteran instructors of public schools who have just been retired represent a large per cent who have passed the age of 60 years and who have also taught for at least 30 years. Those in active service over the age of 60 years have been estimated at 435.

Houston, Tex. The school board has adopted a revised salary schedule by which the maximum salaries of grade teachers have been raised from \$90 to \$100 per month. The maximum for high-school instructors has been raised from \$122 to \$133, and that of high-school principals has been raised from \$2,400 to \$2,500. Elementary school principals will receive a maximum of \$1,900 in place of \$1,700 formerly paid.

Milwaukee, Wis. The rules committee of the school board has recommended salary increases for teachers amounting to \$39,604 and the lengthening of the school day by one-half hour.

The proposed changes in salary will establish a sliding scale based on length of service with annual increases until the maximum has been reached. This is indicated in the high-school schedule by which teachers in Class A are to receive the minimum of \$1,440 and increases of \$90 per year until the maximum of \$2,160 is reached. Class B teachers will begin at \$840 and receive increases of \$60 until the maximum of \$1,620 is reached.

Newport, R. I. The school board has adopted the eight-year plan for the grade schools of the city providing for the entrance of students directly into the high school.

Hamilton, O. Dr. Dan Millikan, president of the board of education, and for many years a

member of the same body, died on June 6th of hardening of the arteries and a complication of other diseases. Dr. Millikan was for many years prominent in school-board circles in the state of Ohio and did much to better school conditions in his own community and in other cities of the state.

A practical step in the evolution of the vil-

lage school as a social center has been taken by the people of Frederic, Wis. Recently the school board of that place made arrangements to use the three omnibuses, which daily bring children to the school from a territory of fifteen miles about Frederic, to transport residents in the school district to lectures, motion picture shows and other social center programs.



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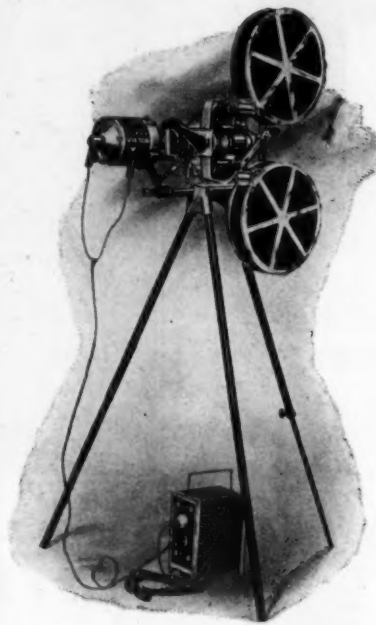
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Out of the Day's Work

Routine Inspection Record.

As a means of keeping a record of school conditions as they are noted during regular routine inspections, Mr. Frank M. Rich, District Superintendent of Schools, Marlboro, N. H., employs the following outline:

VISIT to.....SCHOOL, DATE.....TEACHER
I—Appearance and physical conditions of the school.

Grounds Closets Entry Washing
Interior Temperature Ventilation and drink-
Seating Games and calisthenics ing facilities

II—Attendance and other data.

Absence Tardiness Report cards
Program Plan book

III—Scholastic work and advancement of pupils.
Writing Drawing Spelling and dictation
Composition Grammar Geog. Hist.
Physiol. Arith. Read. Phonics
Music Miscellaneous

IV—Methods and management.

Corrections Postures Seat work Cleanliness
Order Courtesy Spirit Methods
Speed Recitations
Care of supplies
Previous suggestions

Mr. Rich has found the outline of value in preventing the omission of important details which cannot, for lack of time, be discussed with teachers. A copy is usually left with the teacher and a duplicate is kept in the superintendent's office.

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Defects.....
Mental Characteristics: Alertness.....
Application..... Judgment.....
Initiative.....
Pronounced Tendency: Commercial.....
Mechanical..... Artistic.....
Professional..... Inventive.....
Moral Characteristics: Honesty.....
Reliability..... Perseverance.....
Social Characteristics: Leadership.....
Sociability..... Popularity.....
Adaptability.....
Engaged in what school activities.....
Vocational Characteristics:
Home neighborhood.....
Financial condition of family: Good.....
Fair..... Poor.....
Remarks:..... Teacher.....
..... Date.....

Pupil's Personal Record Chart.

From what elementary school.....
Age at graduation.....
What did you do last vacation? Play...Work...
Total earnings.....
What do you do after school?.....
Name favorite studies: Shop... Amusements...
Leisure.....
Do you like to read?..... Class of books.....
Do you intend to complete a course in high school?.....
Normal..... College.....
What occupation would you like to follow? First choice..... Second choice.....
Do you attend church regularly?.....
Do you smoke..... Are you nervous?..... Is your sight good?..... Is your hearing good?.....
Are both parents living?..... Occupation of father..... Sisters..... Brothers.....
Birthplace of father..... Mother..... Pupil.....

SCHOOLROOM HYGIENE.

The Pittsburgh Board of Public Education has adopted a resolution by which rigid preventive measures against the spread of contagious disease in the public schools have been taken.

It is provided in the rule that the office of the superintendent of schools, as well as the local department of health, shall be notified by physicians when a contagious disease breaks out in a home where there are school children. Schools which are attended by such children are to be immediately fumigated.

Springfield, Mo. Systematic medical inspections will begin in the public schools with the opening of the fall term of school.

Moline, Ill. Supt. C. H. Maxson has begun an investigation into the subject of a school nurse for the protection of the school children against disease. The plan, as outlined by Mr. Maxson, is, "One nurse for all the schools of the city who shall give her whole time to the work. She will have a schedule much like that of the school supervisors and will spend a certain period of the day in each school. Her work will not be that of physician, but she will examine cases of children in need of medical attendance and will inform the parents of such need. Another large part of her work will be to examine and report on the sanitation of the school buildings.

"For the position there will be secured a woman who has training in the work of a school nurse."

Janesville, Wis. Thru the efforts of a number of local club women, funds have been collected for the maintenance of a free dental clinic for school children. The clinic will be located in the City Hall.

The school board of Grand Rapids, Mich., is looking into the future needs of the schools and to this end has asked for an appropriation of \$138,000 for the purchase of new sites for needed buildings. The sum of \$68,000 is to be used in meeting the present needs in the way of additions. It is the experience of the board that the school population in the north, east, southeast and southwest sections of the city is to continually grow and in order to procure sites for the future needs it has been deemed advisable to purchase while the property is at a low figure. Delaying the action until the additional ground is needed means that the cost will be greater and the choice of suitable sites will be narrowed to such vacant lots as may still remain.

SCHOOL LAW—RECENT DECISIONS.

Gifts or Endowments.

A gift for the foundation of a manual training school is not invalid on the ground that such a charity has been superseded by the adoption of manual training in the public schools.—Wilson vs. First Nat. Bank, Iowa.

Schools and Colleges.

A conveyance of land to the trustees of a college for the use and behalf of the college does not require the use of the land for school purposes, and the college may convey the property.—Claremont College vs. Riddle, N. C.

Under the North Carolina Revisal of 1905 (§946), a conveyance of land to the incorporators and trustees of a college, to have and to hold to them and their successors in office forever, held to carry the fee.—Claremont College vs. Riddle, N. C.

A college was not liable for an injury to a third party caused by its students in connection with the game of baseball; the game not being under college control, or part of the college athletics.—Corley vs. American Baptist Home Mission Society, S. C.

Public Use of School Buildings.

Holding Sunday school or religious meetings in a country schoolhouse not exceeding four times a year, and not so as to interfere with school work, held not to constitute the schoolhouse a "place of worship" within the Nebraska Constitution (Art. 1, §4).—State vs. Dilley, Neb.

Mandamus will not lie at the instance of a taxpayer to compel a school district board to close a schoolhouse to occasional religious meetings on Sunday, where he is not required to contribute anything to the support of the meetings or repair of the schoolhouse.—State vs. Dilley, Neb.

Public Schools.

Under Burns' Ann. St. of Indiana, 1908, §6447, providing for the enumeration of children of school age in school districts, such enumeration is not necessary to attach children to a school district, but the residence, and not the enumeration, fixes the attachment.—Greenlee vs. Newton School Tp., Jasper County, Ind. App.

School District Property.

Burns' Ann. St. of Indiana, 1908, §9598, providing that certain contracts by school trustees must be in writing, does not apply to contracts for the transportation of children from abandoned schools, under section 6422, requiring trustees to provide for such transportation when schools are abandoned.—Greenlee vs. Newton School Tp., Jasper County, Ind. App.

The mechanic's lien authorized by the Oklahoma Statutes of 1893, §4527 (Rev. Laws 1910, §3862), cannot be enforced against public school property.—Minnetonka Lumber Co. vs. Board of Education of City of Sapulpa, Okla.

School District Taxation.

A contract between a school district and an architect held not invalidated by a subsequent construction contract which was illegal because it created a debt beyond the constitutional restriction, where the illegal act was not contemplated on the execution of the architect's contract.—Sauer vs. School Dist. of McKees Rocks Borough, Pa.

Where a contract does not fix the amount of liability from its date, it does not create a present indebtedness within a constitutional restriction on indebtedness.—Sauer vs. School Dist. of McKees Rocks Borough, Pa.

School district bonds cannot be issued in anticipation of income from taxes levied or to be levied in an amount greater than the amount of the income to be anticipated thereby.—Rabe vs. Board of Education of the Canton School Dist., Ohio.

In determining the amount of income from taxes that may be anticipated by an issue of school district bonds, the calculation must be based on the same proportion of the total maximum levy in the district as that proportion of the maximum levy which it is authorized to certify to the budget commissioners bears to the total maximum levies that all tax authorities within the district are authorized to certify.—Rabe vs. Board of Education of the Canton School Dist., Ohio.

In an action to recover for the transportation of school children from a district in which the school was abandoned, to another district to which they were transferred, an averment in the complaint that the advisory board at a certain annual meeting appropriated \$500 for such purpose was sufficient as showing the existence of a fund.—Greenlee vs. Newton School Tp., Jasper County, Ind. App.

The statute exempting charitable and educational institutions from taxation should be read in the light of the policy of the state, established early in its history and increasing in liberality as time passed, to encourage education.—People ex rel. Walcott vs. Parker, N. Y. Sup.

Where a contract for the transportation of school children, under the laws of Indiana (1908, §6422), requiring township trustees to provide such transportation for children from abandoned schools, was executed, the township could not escape payment because no definite amount for such services was agreed on, but it was liable for their reasonable value.—Greenlee vs. Newton School Tp., Jasper County, Ind. App.

School District Claims.

In an action to recover compensation for the transportation of school children from a district in which the school had been abandoned to another, it was not necessary to allege and prove that the conditions existed as prescribed by the Laws of Indiana (1908, §6422), which permitted such abandonment.—Greenlee vs. Newton School Tp., Jasper County, Ind. App.

Teachers.

The legislative intent in the Public Laws of New Jersey (1912, p. 89), was to pension teachers who had served for twenty years in the territory to be charged with payment of the pension, and the consolidation of districts under act of 1894 (P. L., p. 506) did not destroy the continuity of a teacher's employment and service so as to deprive him of the right to a pension.—Pearce vs. Board of Education, of Brick Tp., N. J. Sup.

The Supreme court of Washington, in a decision recently rendered in the case of M. N. Bopp against E. R. Clark of Fayette County, has upheld the constitutionality of the teacher's minimum wage law.

The higher court, in effect, affirms the judgment of the lower court. Says the Court: "It is a matter of common observation that school officers are sometimes large taxpayers who have no children dependent



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upon the public schools for their education. Such officers are under constant temptation to over emphasize the importance of low wages for teachers and to attach too little importance to the qualification of the teacher. In such cases the lowest bidder obtains the employment and this often to the great detriment of the public interests.

"Whether the practical working of this legislation will meet the intended purpose, can be determined only by experience. All new legislation is necessarily experimental and in a sense tentative. The courts cannot be called upon to guarantee its wisdom. All we hold here is that the legislation in question herein is within the domain of legislative authority."

In this case, Bopp, president of the school board in a country district hired a teacher at less than the minimum wage. He was arrested and brought action against the sheriff to gain his release, charging the law to be unconstitutional.

LEGAL NOTES.

The Ohio Supreme Court has sustained the validity of the "small school board" of Cincinnati provided in the so-called Jung law of 1912. This law, which went into effect in January of the present year, removed from office the board of fifteen members and replaced it by a commission of seven.

An opinion of city solicitor B. F. Primmer of Hamilton, Ohio, to the school board of that city, is to the effect that inasmuch as the local board had previously passed a resolution asking the sinking fund trustees to act as a sinking fund for the Hamilton school district and the board consented, that the board does not need a separate sinking fund appointed by the common pleas court as the state examiner had urged.

State Superintendent Edward Hyatt of California has given a decision to the effect that parents of children injured while enjoying public school playground apparatus or engaged in school gymnasium work, are not entitled to damages unless the accident occurred thru faulty construction of the apparatus. The decision was given in reply to an inquiry of the Ukiah school authorities where two children were injured while at play.

Must Present Certificates.

The Supreme court of South Dakota, on June 8th, rendered a decision to the effect that all children must submit to an examination by a personally chosen physician showing a health record or they could not attend the public schools. The court held that such a physical record card as is required is a reasonable exercise of police power. In answer to the charge that the "examination called for may result in such mental suggestion of disease as may result in mental disease germs", the court replied: "If such an examination is a menace to a child's health, owing to the danger of mental suggestion, the study of physiology and hygiene should be banished from our schools. The time may come when the contention of the appellant will become the accepted doctrine of the day but the court must follow the accepted doctrine of the present except when thru competent evidence submitted the fault of a particular doctrine is established."

The decision was given in the case of John H. Streich vs. the board of education of Aberdeen.

The Editor's Mail

SENATE BILL FOR FEDERAL AID FOR VOCATIONAL EDUCATION BASED ON REPORT OF FEDERAL COMMISSION, JUNE 1, 1914.

To the Editor:

The Bill for Federal Aid to Vocational Education, in Section two, appropriates \$500,000 for year ending June 30, 1916, for teaching agriculture and an equal sum for teaching trade and industrial subjects. These amounts increase annually to \$3,000,000 for each subject (total \$6,000,000) for the year ending June, 1924.

Section four appropriates \$500,000 for the training of teachers in the year ending June 30, 1916, increasing to \$1,000,000 for year ending June 30, 1919, and annually thereafter.

The Act provides that all teachers of these sub-

jects must either have practical experience before going to school or get that experience in the school. Proponents of the Bill say this is to keep the ordinary manual-training normal school from turning out formal teachers. Others, however, feel that such a normal school can add a few more machines to its equipment and can qualify altho not substantially changing its instruction. Also, that it may be wasteful, if not hurtful to train teachers at the beginning other than by taking them directly from the universities by the most careful selection possible and training them in connection with their teaching and in summer courses. This is being done very satisfactorily in several places.

Section six reads: "A Federal Board for Vocational Education is hereby created to consist of the Postmaster General, the Secretary of the Interior, the Secretary of Agriculture, the Secretary of Commerce and the Secretary of Labor. The Commissioner of Education will be the executive officer of the Board." The sum of \$200,000 (Sec. 7) is appropriated for the use of the Board.

There is general satisfaction that the need of a Federal Commission or Board is recognized and that very able men are named for it. It is regretted by many that the proposed Board is ex-officio, each member occupied with a task for which he is especially chosen, taking the utmost, presumably, of his strength. It is felt that the President who selects able men for his departments should select men as able who will devote all their time and energy to the development of vocational education—this new task of supreme importance. There are thirty odd millions of workers and all their descendants to be immediately affected. The character and prosperity of our industries and commerce are to be immediately affected, the cost of living, the spiritual and physical values of all our people and their happiness. Does not the form of Board proposed reduce itself to a pro-forma, ex-officio Board with a single head of a bureau as the power? Is it fair to ask any single man with a few assistants and under the shadow of great names, to distribute money and take the multi-form responsibilities involved?

The New No. 24 One-Story School Building at Rochester, New York, mentioned in the May Issue of this Paper



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ROCHESTER, N. Y.

Thirty-five states now have State Boards of Education and all but a half-dozen out of this are pro-forma in character, consisting of the State Superintendents and two or more of the state officials. These Boards have been almost utterly without consequence or influence. The single administrative authority has been as much alone in the administration and development (?) as if there were no Board. There has been neither initiative nor development from the head down.

The State Superintendents of 33 states are elected by popular vote. Necessarily (and without disrespect) they are vote-getters primarily. They must distribute largess graciously; they must not criticise severely nor object, and they do not.

To make a federal law effective, do we not need, above everything else, a working Board like the Interstate Commerce Commission, the Federal Reserve Board, or the Federal Commission on Industrial Relations, a Board especially experienced in the vocations representative of the vocations themselves, employers and skilled workers together with representatives of the general public? To say that we do not need such a Board is to allow that the relatively less important Interstate Commerce Commission might be discontinued and its work left to a Bureau Chief in the Department of Commerce and the work of the Federal Reserve Board left to the Head of a Bureau in the Treasury Department.

Section five requires: A State Board is to be named in each state to receive Federal funds and direct their use. This may be the present ex-officio and almost utterly useless type of State Board or any other. Must we not hope that a study of present state Boards as generally constituted, will impress upon all friends of the measure, the necessity of a thoroly responsible special Board. It seems inconceivable to some that State Boards, now conspicuous in their lack of accomplishment and established long years ago when education was very general and nothing was expected of them, will be recognized in this work.

To secure funds (Sec. 8) the State Boards "shall prepare plans, showing the kinds of Vocational

Education" which they propose to develop and "if the Federal Board finds the same to be in conformity with the provisions of the Act, the Federal funds shall be forwarded. "If any allotment (Sec. 16) is withheld from any State, the State Board of such State may appeal to the Congress of the United States." Note the negation. Congress is not to pay for the right sort of Industrial Education, but rather to remit upon receipt of a plan not inconsistent with a very general act, with an appeal to Congress if it fails to remit. In substance, a supposedly very able head of a Bureau with men necessarily deeply engrossed in the political outcome are to be pitted against all the Congressmen and their constituents if they withhold funds anywhere. Is this constructive or is it mere distribution?



MR. J. F. KIMBALL,

Superintendent of Schools-elect, Dallas, Texas. Mr. Kimball was elected on May 29 to succeed Superintendent J. A. Brooks, resigned. He was superintendent at Temple for 15 years.

The funds for the industries may be spent on Vocational High Schools and other all-day, all-week schools except that one-third of the total, at least, is to be spent for part-time and Continuation Schools.

As a member of the Commission has said, its report represents sixty days' consideration with few hearings and with the most important legislative problems under consideration at the same time that Congress has faced in many years and the menace of war also upon them. May we not, at the same time, be glad for what the Commission has accomplished and trust, as this Commissioner said, for further material improvement in the coming six months before the Bill will be very seriously considered in the House and Senate?

The Undersigned will be grateful for an expression of judgment from any who are interested.

H. E. Miles.

Racine, Wis., June 23, 1914.

Mr. Wheeler to Newton.

Mr. Ulysses G. Wheeler, for the past four years superintendent of schools in Passaic, N. J., has been chosen head of the Newton, Mass., schools, succeeding Dr. Frank E. Spaulding.

The new superintendent is well known around Boston, as he has held similar superintendencies in Wakefield and Everett. He is a graduate of Brighton Academy and of Bates College.

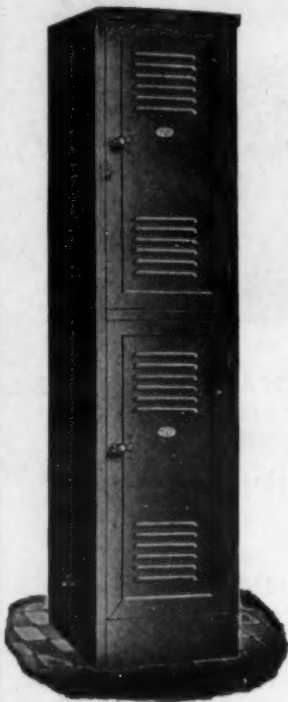
On receiving his degrees at Bates, he became principal of the Brewer, Me., High School, which he held until 1889, when he became the sub-master and head of the science department in the Lewiston, Me., High School. He continued in Lewiston until 1892, when he was appointed superintendent of schools in the district comprising Agawam, Granville and Southwick, Mass., which position he held until 1894, when he was appointed superintendent of schools in West Springfield. From 1899 until 1902 he was superintendent of the schools of Wakefield, and from 1902 to 1910 he was head of the Everett schools, going to Passaic, N. J., from Everett.

Ames, Ia. Summer schools have been opened in the Central building with sessions from eight to eleven-thirty o'clock.

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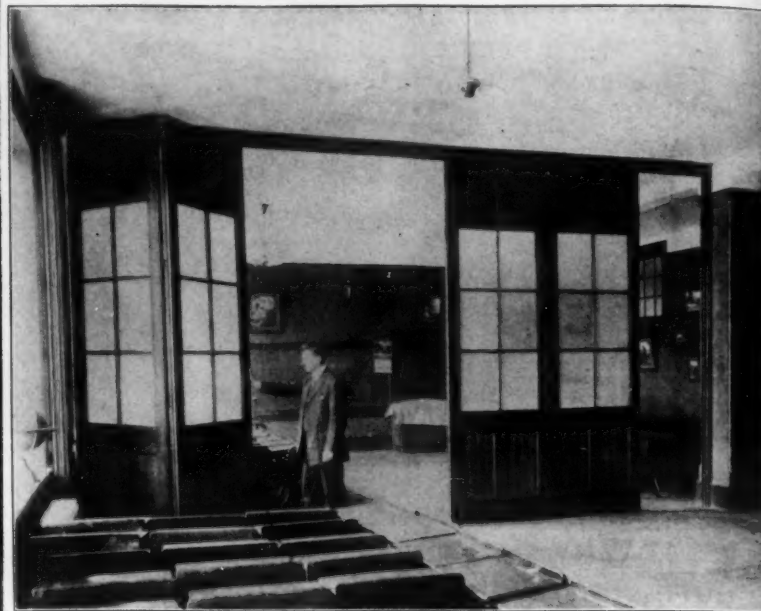
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PERSONAL NEWS OF SUPERINTENDENTS.

The school board of Houston, Tex. has increased the salaries of a number of its supervising officials. Supt. P. W. Horn has been raised from \$4,000 to \$5,000; Dr. F. J. Slataper, supervisor of hygiene has been raised from \$3,000 to \$3,600; W. Peine, business manager of the school board, has been raised from \$2,100 to \$2,400.

Salt Lake City, Utah. The Salt Lake Board of Education has re-elected Supt. D. H. Christensen unanimously for a term of two years.

Dr. Christensen has served thirteen years in the position. Members of the board took occasion during the election to congratulate Mr. Christensen on his long tenure and pre-eminent success as head of the Salt Lake schools.

Supt. John M. Mills of Ogden, Utah, has been re-elected at an increased salary of \$3,800 per year.

Mr. F. G. Wadsworth, superintendent of schools of Hollowell and Winthrop, Me., has been appointed agent of the Massachusetts State Board of Education to succeed Julius E. Warren deceased. Mr. Charles R. Allen, formerly agent for the supervision of industrial schools, has been transferred to the department for the training of industrial school teachers. He has been succeeded by Mr. Chester L. Pepper.

Commemorating the 25th year of service as superintendent of schools, Dr. Jacob A. Shawan of Columbus, O., was on June 7th tendered a reception at a local public hall. During the evening, a continual stream of members of the teaching corps and friends of Dr. and Mrs. Shawan passed the receiving line.

At the conclusion of the evening's entertainment, Dr. Shawan was presented with a beautiful platter and carving set, on the back of which was inscribed: "1889-1914. With loving appreciation to Superintendent Jacob A. Shawan from the teaching force of the Columbus Public Schools."

The reception and its accompanying gift was planned by the Columbus Principals' Association following Dr. Shawan's re-election at a recent meeting of the board.

Wheeling, W. Va. C. E. Githens, principal of the Fourth Ward School, has been elected super-

intendent of schools to succeed H. B. Work resigned. The salary has been fixed at \$2,500.

As a fitting tribute to the conscientious and untiring efforts of Supt. E. O. Holland in his work as head of the Louisville school system, citizens and members of the teaching corps of that city, met in the Hotel Watterson on June 13th at a testimonial dinner. During the evening a number of addresses of a congratulatory character were delivered by the Mayor and other men of prominence in the social and business life of the city. In speaking of the high regard of the community for Supt. Holland, Mayor Buschemeyer said: "I know that when such men as I see around me here, make up their minds that the present system of education shall prevail, no power on earth can interfere with the system as it stands. I am willing to do all I can, in my humble way for the cause of education. The board of education is laying the foundation of our future government. The training of the minds of our children is a great and noble work deserving the support of all men."

The Boston school committee, with the approval of Supt. F. B. Dyer, has raised the entrance age of school children to 5½ years. Children who have had a year's training in the kindergarten may be admitted previous to that age.

Bristol, Tenn. Mr. R. B. Rubins of Madisonville, Ky., has been elected superintendent of schools to succeed P. S. Barnes who has resigned for the purpose of pursuing a special course at Columbia University, New York City. Mr. Rubins is succeeded by Mr. D. W. Bridges of Richmond, Ky.

C. S. Risdon, superintendent of the public schools of Independence, Kans., was appointed by the Governor on June 5th, as a member of the Kansas Schoolbook Commission to replace C. A. Cain resigned. The new appointee is one of the most widely known educators of the Sunflower State and his appointment gives the educational interests of the state a majority on the commission.

Academic Recognition for Practical Farmers.

In February, 1909, during the annual ten days' Farmers' Congress, the University of Wisconsin

publicly bestowed on three practical agriculturists engraved certificates of recognition. Since then it has each year similarly honored three or four men for their services to agriculture. The recipient of one of these testimonials need not have had any previous academic education. He is selected for the honor wholly on the strength of his contributions to the agricultural progress of the State and Nation. As a matter of fact, the majority of those upon whom these honorary certificates have been conferred do not hold any academic degree. The University officers declare that the certificate itself is not an honorary degree but a new and unique distinction, by bestowing which the University of Wisconsin publicly testifies that there are achievements not connected with formal education that are worthy of recognition by the highest educational agency of the State.

Within the past year the Maryland Agricultural College has put into operation a similar policy. The faculty has voted to grant annually a limited number (usually three) of certificates of merit to citizens of the State who have achieved distinction in some field of agricultural activity. Like the Wisconsin testimonials, these certificates are not awarded on the basis of scholastic attainments or training. They record the opinion of the faculty that the efforts of the individuals upon whom they are bestowed have tended to advance the economic, social, or moral conditions of rural life in Maryland. Thus the college hopes to encourage men who have had no opportunity for academic education in their devotion to the interests of agriculture and country life. For the present these honors are restricted to citizens of the State, three having received the distinction last June, but ultimately it is planned to remove this limitation.

A Factory Class Graduation.

The graduation exercises of the first factory class organized by the New York board of education were held on June 4th in the white goods factory of D. E. Sicher & Company. Thirty-eight girls received certificates of literacy and proficiency. The girls were all foreigners who could speak no English when they arrived in New York City about a year ago.

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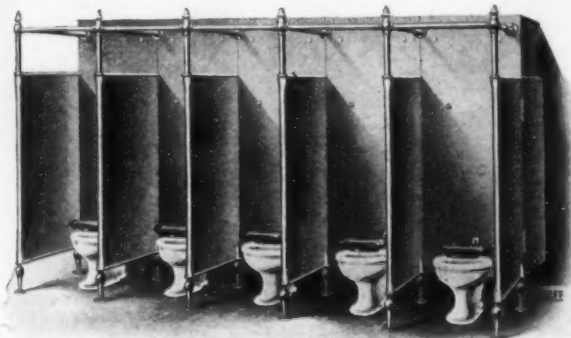
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SPELLING REFORM NEEDED.

It is hard to judge whether our illogical system of spelling English words, or poor teaching, is to blame for the bad spelling of high-school graduates. An officer of the New York State Education Department is authority for the statement that 56 ways of spelling the word "isosceles," none correct, were found in the examination papers submitted last spring in the regents examination of high-school students. Here are the 56 varieties as this official found them:

Eoslees, eseles, esoseles, iceosseles, icisoles, icososcles, iscoceles, isecocholes, isceles, iscolos, iscosceles, iscosceles, iscoscles, iscoloes, iscoeleous, iscosoles, iscoceleous, iscosoles, iscoceleous, iscoeles, iscocelese, isocilles, isocilles isocillies, isocles, isoclese, icoslos, isocoles, iscoolis, isolles, isolices, isoliles, iseloles, isosaleas, isosceless, isoscelis, isoscelles, isoscles, isoselles, isoscoles, isoseles, isoselese, isoselice, isosilles, isosiles, isosocles, isosocles, isosoleas, isosclese, issese-

les, issocles, issolises, issoscheles, issosleses, issoscles, issesseles, issosselles, issossellis, osoceles.

The ingenuity exhibited by some of the spellings would seem to indicate that wonderful results might be obtained if some of the spelling classes in the high schools of New York state were assigned the task of simplifying English spelling instead of learning some of our present senseless forms.

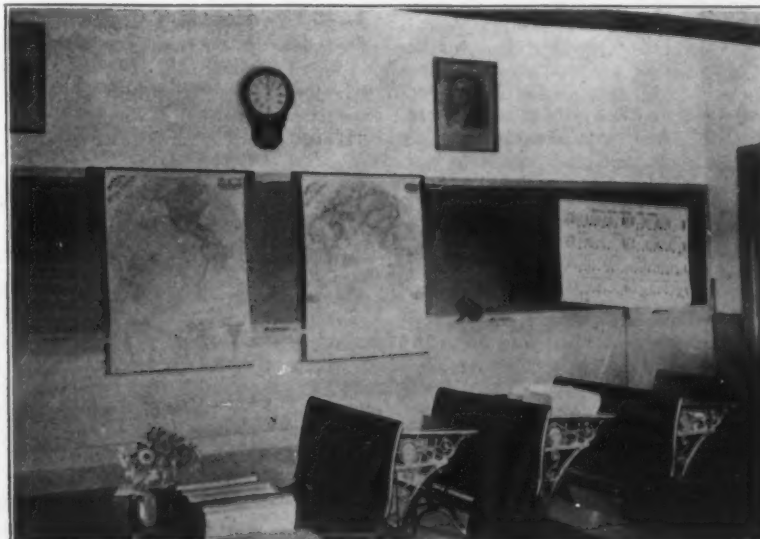
MOTION PICTURE MACHINES SHOWN.

The largest single exhibit of motion-picture machines at the "Second International Exhibition of the Motion Picture Art," held June 8-13 at the Grand Central Palace, New York City, was made by the Nicholas Power Company. The firm exhibited its entire line of Power motion picture projecting apparatus and accessories including the well known Cameragraph No 6-A.

VICTOR IS VICTORIOUS.

The Victor Animatograph Co. has been rendered a judgment in its suit against Geo. W. Bond of Chicago, for infringement of patents on the Victor stereopticon. The patents of Mr. A. F. Victor cover broadly a stereopticon supported on a single base and include the idea of converging carbons carried in the rear end of a cylindrical casing. The exclusive application of these ideas to the Victor stereopticon is assured by the decision.

Joliet, Ill. The science department of the local high school has undertaken the analysis of water, coal, food, etc., for the municipal and school authorities. Equipment has been provided by which it has been possible for some months to analyze coal for the number of heat units which it contains. The school board has adopted a plan used by the large corporations for obtaining coal of the requisite heating quality.

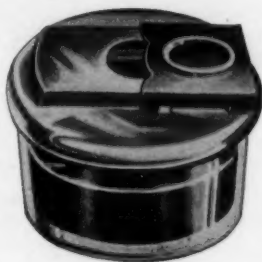


AN EXAMPLE OF A WELL EQUIPPED RURAL SCHOOL.
The Model Rural Practice School, West Maine State Normal School, Gorham, Me.

You Are To Be The Judge In This Case



Pat. Dec. 12, '05
Pat. Jan. 19, '06



Pat. Nov. 14, '11

Write for our free samples, and hand down your DECISION in the way of an order. Non-evaporating, dust-proof and noiseless; no hinges to break or corks to lose.

Write for free samples today.

U. S. INK WELL CO.

Des Moines, Iowa

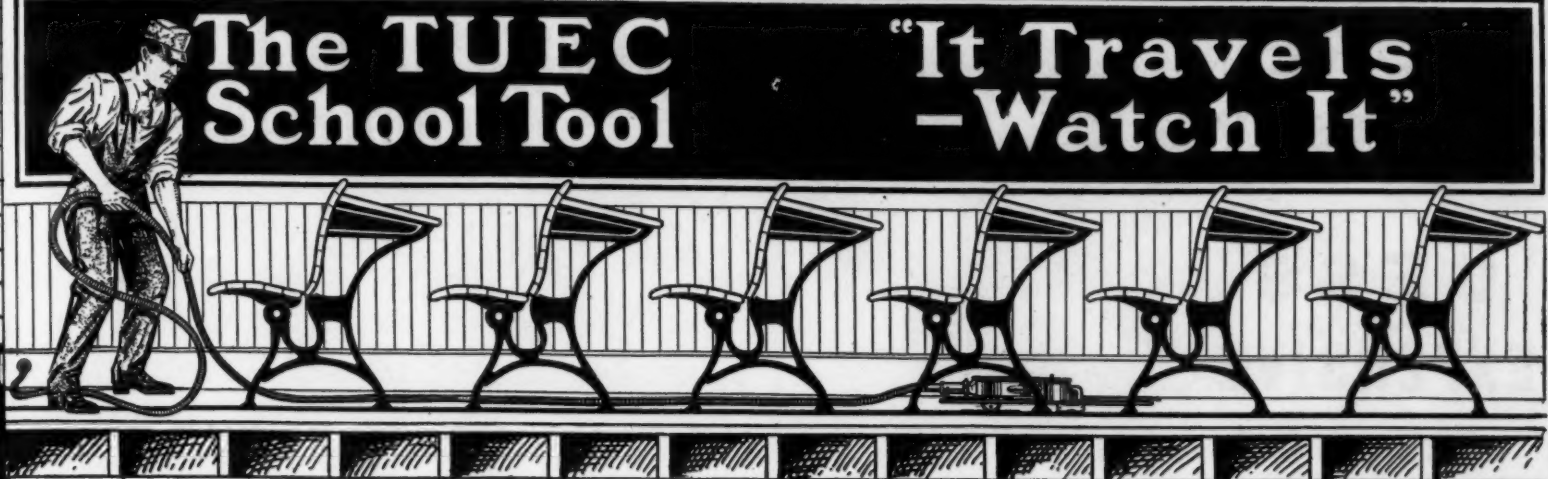
Squires Inkwell Company



Squires No. 3 Inkwell

Undoubtedly our flush top inkwells are the best on the market and much more extensively used than any others. Our No. 3 fits the same size hole as does our No. 8, is finished in bronze, but will nickel when so ordered.

Our No. 12 has a very short neck and extends above the service of the desk only one-half inch. It is made in five sizes to fit holes 1 1/4, 1 1/2, 1 3/4, 1 7/8, and 2 inches. It is provided with a cork stopper having an ornamental composition cap or with rubber stopper, as desired.



And Now Your Old School Building

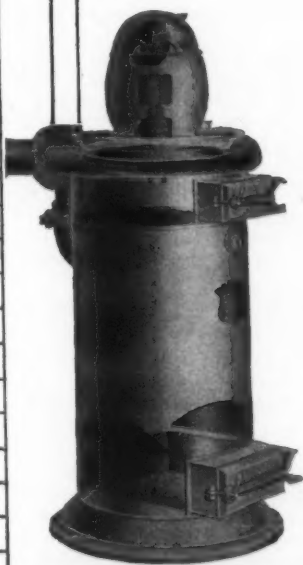
Hundreds of people imagine that vacuum cleaning will do for new school buildings but the old buildings are simply ignored and forgotten.

Old buildings can be piped for vacuum cleaning just as readily as new school buildings. Its only a problem of intelligent workmanship.

Suppose you let us tell you what we can do for an old school building. We won't argue here the merits of vacuum cleaning. If a new school building needs it, certainly the old building needs it more.

Suppose you let us figure on all the schools of your town. We can do the work and have all your buildings in shape by September 1, 1914. Of course, you must act promptly.

So we suggest that you write us today about the cleaning of all the schools of your city.

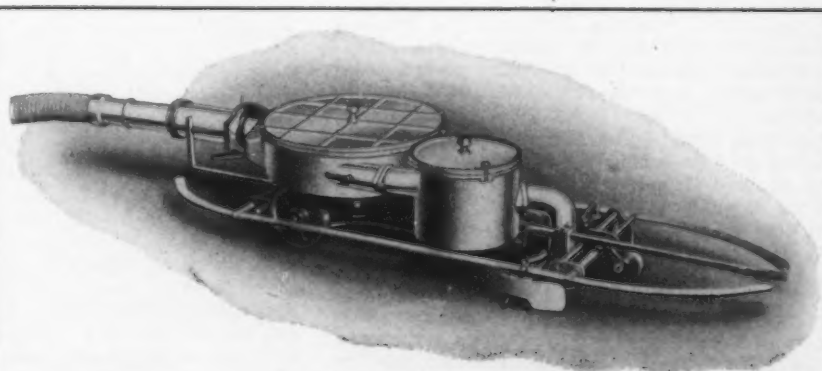


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The United Electric Co.

7 Hurford Street

CANTON, - OHIO



MORE SANITARY — LESS EXPENSIVE

The Verdict of those who
have adopted the

NOKORODE
Sanitary

Closet Partitions

Made from Vismara Pure Iron; Rust Resisting, Corrosion Defying Metal.

A staunch, sturdy, dependable product; offering advantages both in the installation and service, not to be realized in the use of stalls constructed from other materials.

It will be necessary to carefully study details and specifications covering the "Nokorode" Sanitary Closet Partition, to gain a full appreciation of its value and understand its comparative low cost.

It has many distinct mechanical features; such as special adjustable floor flanges, permanently tight interlocking joints (rivetless) and reinforced posts.

Furnished without doors when desired.

Equally adaptable for Latrines, Dry or Individual Closets and Shower Stalls.

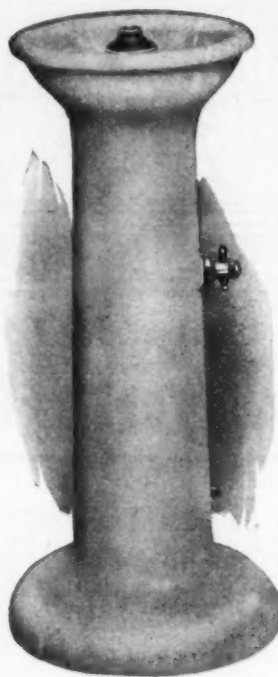
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Henry Weis Cornice Co.
KANSAS CITY

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Special Bulletin describing
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FOR SCHOOLS



"EBINGER" SANITARY DRINKING FOUNTAINS



Look at this durable construction that will withstand the hardest possible usage. Think of the savings made possible by the automatic closing device.

Figure in the permanent service and lasting utility and you've got a bubbler that means money saved. Booklet describing this as well as our other designs sent upon request.

THE D. A. EBINGER SANITARY MFG. CO.
COLUMBUS, OHIO.

BUILDING AND FINANCE.

Washington, D. C. A report on the number of fireproof public school buildings has been recently presented to the board with a chart showing the schools in the order of their equipment against fire. Four buildings are entirely fireproof; thirteen are constructed of fireproof materials with the exception of the roof; thirteen have fireproof corridors only; three have fireproof corridors and stairs. A total of 21 schools are without any provision against fire.

Cleveland, O. The school board is about to undertake the improvement of a number of school buildings recently condemned as firetraps in a report of the local Chamber of Commerce. The report advocated chiefly that sprinklers be installed in the basements of 78 school buildings, and the number to be equipped will not meet the desires of the Chamber, an effort will be made to cover every building which fire prevention experts consider in need of such a device.

The school board of Sacramento, Cal., will during the ensuing year, undertake the erection of three fireproof school buildings at a total cost of \$500,000.

Kansas City, Mo. The building committee of the school board is considering the advisability of limiting the height of elementary schoolhouses for outlying districts to one story. The committee recently visited the city of Rochester, N. Y., to study the Ellwanger and Barry School, a one-story structure.

Quincy, Ill. The school board has recently abolished the position of school carpenter and has ordered that the janitors of the several buildings do all the work previously done by this employee.

Frederick Pfister, Architect, announces the opening of new offices in the Times Building, 42nd St. and Broadway, New York City, which will be located on the 20th Floor. He also has an office at 1151 Hoe Ave., Bronx.

An investigation into the cost for light, heat and janitor service in public school buildings by the school officials of Joliet, Ill., has indicated that there is a wide difference in the amounts of light and heat consumed by various structures. In the Joliet schools, it has been found that the range in light cost is all the way from one kilo-

watt to 58 kilowatts, the latter being accounted for by the large space lighted and the small attendance of pupils. The amount of power consumed ranges from five to 48 kilowatts per hour. The cost, per pupil, for lighting purposes, ranges from eight cents to 39 cents.

In the matter of heating cost, it has been found that the smaller buildings have a higher cost due to faulty construction, loose windows, poor heating apparatus or large room areas. The cost ranges from 83 cents to \$6.39 per pupil, based on the kind of coal (hard or soft) in use. In the modern buildings automatic temperature control keeps the temperature at a uniform standard and insures a certain amount of moisture in the air.

The report brings out the fact that a number of the buildings do not conform to the modern standard of lighting, namely, window surface equal to at least 20 per cent of the floor surface. Out of twenty buildings, nine have the required amount of window surface, while thirteen structures fall below the standard.

A new officer in the Buffalo educational system is a superintendent of janitorial work at a salary of \$2,000 per year.

A change is proposed in the janitor system of Buffalo schools, Supt. Henry P. Emerson being of the opinion that there should be a separation of the positions of janitor and engineer in the high schools in order to secure good results in the operation of the heating and ventilating plants. The extension of this plan to all the schools is objected to by the superintendent on account of the expense. The method in use for some years has been to pay the janitors a good salary and require them to hire out of this money extra employees to clean the schools.

In the new technical high school at Buffalo the indirect lighting system is used in all classrooms. Semi-indirect lighting is used in the hall and auditorium. The lecture rooms are equipped with motors for adjusting the curtains, the instructor pressing a button at his desk to regulate them. An exhibition of work by pupils was recently given and among the displays was one of the plumbing furnaces made by the boys at a cost of \$1.90 each, such furnaces being worth \$16 each in the market.

SALARY RULES.

The school board of Joliet, Ill., has amended its rules for the payment of teachers' salaries, providing for increases for all teachers and principals with the beginning of the school year.

The qualifications and salaries for all teachers are as follows:

1. Graduates from an approved two-year normal course, or its equivalent, may enter the third year of the trial period at an initial salary of \$500.
2. Trial teachers will receive from \$400 to \$500 per school year; regular teachers will receive from \$550 to \$700, and professional teachers from \$750 to \$900.
3. The salaries of teachers in the manual training and domestic science departments will be \$600, minimum; \$1,000, maximum, per school year. The annual increase of salaries for members of these departments will be limited to \$100, to be granted only upon recommendation of the superintendent.
4. In the matter of salaries the heads of these departments will be classed as supervisors.

The salaries will be limited to a maximum of \$1,700 and the annual increase to \$100, dependent upon the recommendation of the superintendent.

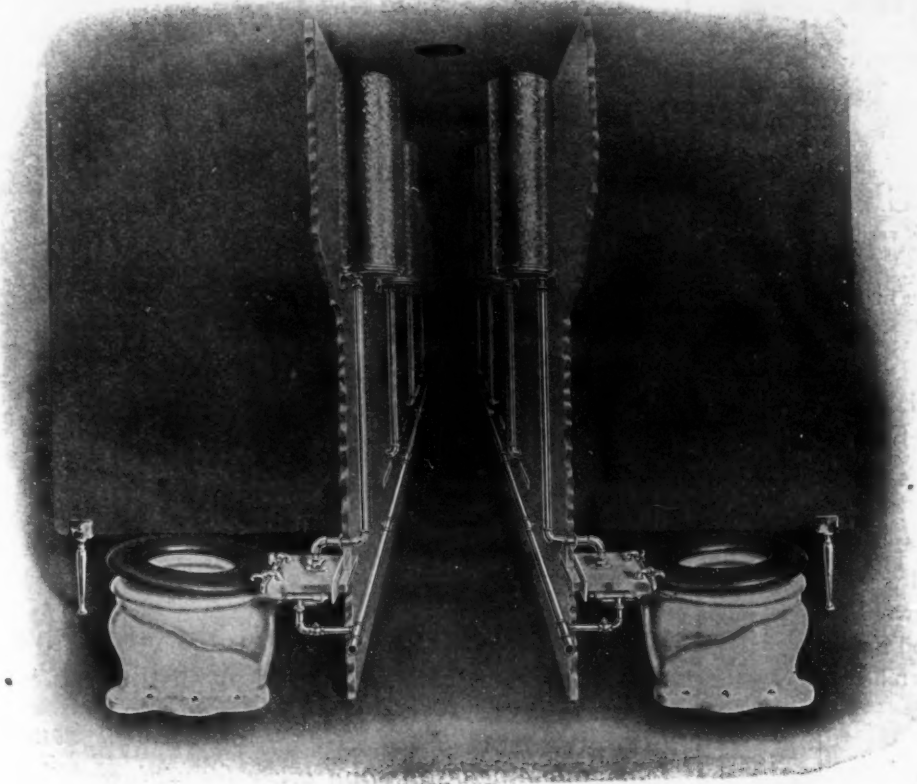
SUMMER SCHOOLS.

Baltimore, Md. The summer schools of the city opened on July 6th for public school children at four school buildings. The schools are open five days each week, from 8 or 8:30 in the morning until midday. Preference is given to applicants in the following order:

1. Pupils that have failed in but one basal subject.
2. Pupils that have failed in but two basal subjects.
3. Pupils that are retarded (more than two years behind the grade).
4. Pupils that have failed in more than two basal subjects.

After the schools have been organized, pupils need not report for work until the hour scheduled for the subject in which they are deficient; and they may leave for the day when the required work for the day has been done.

Every now and then a committee --



Nelson Closet Stall with Ventilating Chamber

sets out to visit schools to discover "The Best" for a contemplated school building. Invariably the committee will discover somewhere

Nelson Pressure Tank Closets

Equipped with Ventilating Chamber

Whether you visit schools or not, let us tell you more about our plan. It won't be necessary to leave your office even tho the man who sees specifies

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Houston, Texas.

HIGH-SCHOOL NOTES.

Visalia, Cal. The school board has adopted a new program schedule, prepared by Principal A. M. Simmons, for the local high school. The schedule provides for five periods of 70 minutes each and allows of study for each recitation during the first half of the period. The former plan provided for seven periods of 45 minutes each with from one to two periods for study during the day.

Boston, Mass. Fall examinations for delinquent students have been abolished at the Classical High School. Promotion for all students has been definitely fixed for the month of June and the only extra examinations to be given in the future will be for students who wish to make a passing grade in one or two subjects.

Northampton, Mass. Greek as a high-school subject has been abolished in view of the fact that it is not a required subject for college entrance.

The Jamaica High School, New York City, has had in operation during the past few months, an advisory council consisting of five members elected by the faculty. All questions concerning the general welfare of the school are submitted to the council for consideration at the weekly meetings. It is usually found that the faculty adopts the recommendation made by the council and it is generally believed that it is an instrument tending to better the general administration of the school and to relieve difficult problems.

Boston, Mass. Beginning September, 1914, a clerical school will be opened in the Roxbury High School for the benefit of students who have passed the first two years of the high school. Two courses have been provided, the first being intended to train for office service and open to students who have completed two years of satisfactory work. The subjects include bookkeeping, office practice, commercial arithmetic, commercial law, penmanship and business English.

The second course is intended for higher clerical work available to students who have completed three years of high school. It consists of shorthand, typewriting, penmanship, business arithmetic, English, bookkeeping, political geography and office practice.

Tulsa, Okla. The school board has created the office of "advisor of girls" in the high school.

A thoro and efficient course in Agriculture



CLASSICAL EDUCATION. :

Panel, Chicago City Hall.

John Flanagan, New York City, Sculptor.

is to be made possible for the high school at Freeport, Ill., thru the appointment of a special instructor. Instruction will be given during school hours and experiments with seeds and grains will be made in vacant lots. Soil tests in various parts of the county will be made and the real soil conditions obtained. There will also be included the subject of live-stock judging.

The New York City board of education has requested that all boy students who expect to enter the DeWitt Clinton High School at the opening of the school term, choose Spanish as their foreign language. It is found that many boys from this school find their way into the business houses and for these it is believed that Spanish is of more practical benefit.

The committee on elementary schools of the New York board of education has approved the recommendation of the board of superintendents that the teaching of German be tried in grades 5A to 8B of Public School No. 22, Queens Borough.

Clinton, Ia. The school board has revised its rules for the administration of the high school during the ensuing school year. The new rules are as follows:

The gymnasium is reserved for the high-school students only. A standing of 80 per cent or above in deportment constitutes the condition for all who wish to become members of an athletic team. Out-of-town games, with two exceptions, are not permitted.

Arrangements for class functions connecting with closing exercises of schools shall not be made prior to the opening of the spring term of school. The principal is required to attend all meetings of the high-school classes during the spring term that he may counsel the students on any subject relating to class functions.

No agent will be permitted to interview any class or class member on the school premises, relative to the sale of any article.

High-school principals are required, at the close of the semester, to record the grade of all students in both permanent and reference records.

Teachers shall have full possession of their particular rooms when detaining pupils for the purpose of discipline or extra instruction.

"FROZEN STIFF" is the

usual condition of drinking fountains in Winter.

Remember—

THE MURDOCK BUBBLE-FONT

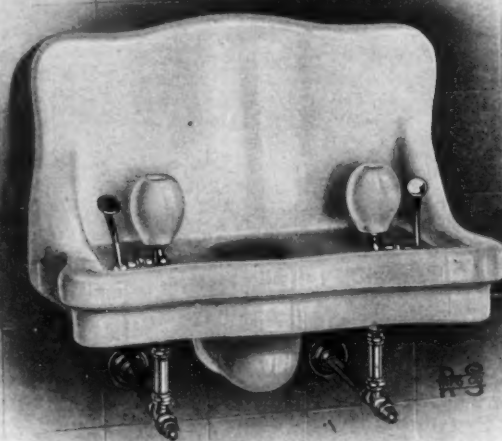
is the only fountain on the market that will not freeze.

Every Doctor will tell you "The place for School Drinking Fountains is in the yard."

Supply your school yard with a Fountain that works twelve (12) months in the year and not only May and June—September and October.

WRITE TODAY FOR BOOKLET

THE MURDOCK MFG. & SUPPLY CO.
CINCINNATI, OHIO

SUMMER IS THE TIME

to install one of our ideal bubblers and solve your drinking fountain problems for all time.

We can answer every demand you make, from heads to complete pedestals and large fountains.

Write us today for our new catalog. We want you to have one.

Rundle-Spence Mfg. Co., Milwaukee, Wis.

**SCHOOL WALL FINISHES.**

Of the considerations which enter into the finish of school walls, three especially are of importance:

First, the material must be sanitary in that it will not readily receive dust and germs and that it can be easily cleaned.

Second, the colors chosen must be pleasant and cheerful, must reflect a maximum of light without glare and must harmonize artistically.

Third, the material must be economical in first cost and upkeep.

As a means of illustrating the perfect agreement of a popular, washable, flat oil paint with the above requirements of schools, the Patek Paint Company, Milwaukee, has just issued a packet of color cards. The material used is Mattcote and the cards give the actual finish as it appears on walls. The cards are sufficiently large to test the sanitary qualities of the paint as well as the artistic, and light-reflecting ability of the several tints and shades. Price lists accompanying the cards verify the claims of the company for the economical character of the paint.

Interested school officers can obtain sets of the Patek Mattcote cards by addressing the School Department of the firm at Milwaukee, Wis.

FIT HIGH-SCHOOL AUDITORIUM STAGE.

The growing acceptance of the principle that school buildings shall serve the broadest civic and social uses which a community can desire is leading to the complete equipment of high-school auditoriums for use as meeting places, for concerts, pageants, theatricals and even for light operas.

A school which has been thus equipped is the new Fort Smith high school at Fort Smith,

Arkansas. The auditorium is in reality a small theatre capable of seating nearly a thousand persons. The stage is large enough for amateur theatricals and has a proscenium arch 40 feet wide and 22 feet high. It is provided with an asbestos drop curtain and a full complement of indoor and outdoor settings. The front asbestos drop has an elaborate painting "The Queen of Sheba's Visit to the Temple of Solomon," chosen for its rich, dignified coloring and its historic interest.

The mechanism of the curtains, side and top pieces is of the latest improved type. The heavy front asbestos curtain is so accurately balanced that the pressure of one hand on the lifting cable will lower or raise it.

The entire scenery was designed in the studio of the Kansas City Scenic Company and was installed by its artisans.

A NEW PROJECTION LANTERN.

A new high-grade projection lantern, especially adapted to laboratory and lecture use, where the most accurate pictures are required, has been put on the market by the McIntosh Stereopticon Company, Chicago, Ill. The instrument is known as the "Multipticon" and is intended in its

simplest form for lantern slide and opaque projection interchangeably. It is ordinarily fitted with 15" focus 4" diameter objective for opaque projection and 8" focus 1 1/2" diameter objective for lantern slide projection. These objectives produce pictures 7 3/4 feet square at a distance of 20 feet from the screen, using a 6 1/2" square opaque object and a slide having 3" mat opening, respectively. An 18" focus 4" diameter objective may be substituted for opaque projection and a 10" for lantern slide projection if desired.

The instrument is mounted on a heavy casting carefully machined. The alignment of optical parts is accurate so as to afford the utmost efficiency. The arc lamp is mounted on an adjustable support which is controlled from outside the lamphouse.

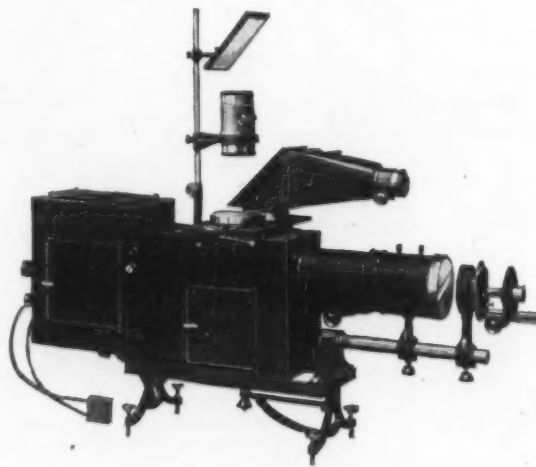
A motion picture mechanism may be added by a simple attachment so as to make an ideal combination for general school use. For scientific and technical purposes, the lantern may be built up by the addition of a vertical attachment and projection microscope. Equipment for spectra analyses and polarized light can easily be added and made interchangeable, as can regular polariscopic projection.

The entire instrument passes any inspection of the underwriters. Complete descriptive circulars can be had by addressing the McIntosh Stereopticon Company, 30 E. Randolph St., Chicago.

INTER-PHONE CATALOG.

A new complete catalog and price list of Western Electric Inter-Phones and accessories has just been issued by the Western Electric Company and may be obtained at any office of the firm. The catalog not only illustrates and describes the many types of inter-phones manufactured for schools, apartment houses, business establishments and individual phones, but also give detail layouts and instructions for wiring and connecting instruments.

The catalog will be especially valuable in school-board offices which must supply repairs to school buildings for such items as intercommunicating telephones, mechanical signalling systems, electric bell systems, program clocks, battery installations, etc.



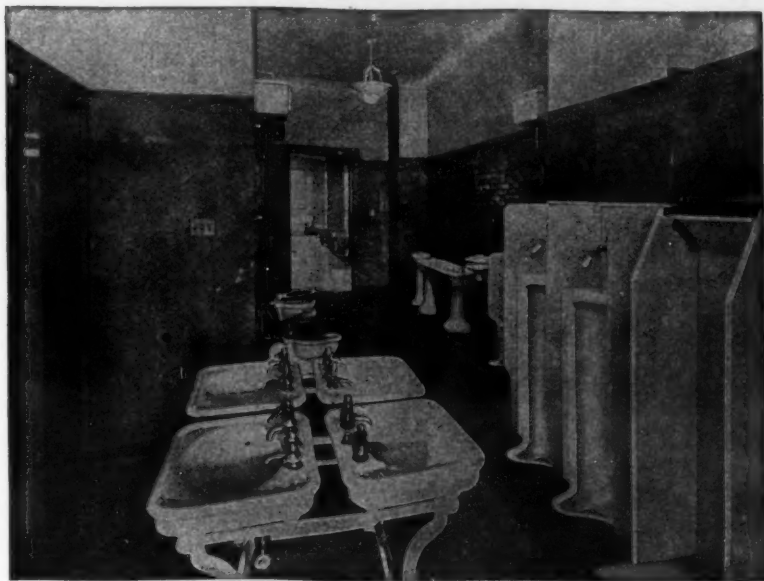
McIntosh Multipticon.

The School Plumbing Fixtures You Install This Summer

will be better bought if you visit the Clow exposition of the latest developments of scientific plumbing as especially applied to schools. The

CLOW PLUMBING

showroom is the finest in the world. Here each model fixture is set up and can be judged while in operation. You cannot honestly specify for new plumbing until you see the **Clow Exhibit**.



School Plumbing Section of New Showroom. You can see the Famous Madden "Automatics" in operation—especially designed fixtures which are the standard for schools thruout the country.

SEND FOR SCHOOL PLUMBING CATALOG.

JAMES B. CLOW & SONS, Chicago

NEW YORK

ST. LOUIS

MINNEAPOLIS

KANSAS CITY

SAN FRANCISCO

TERRA COTTA FOR SCHOOL BUILDINGS.

Someone has well said that the logical material for the ornamentation of twentieth century buildings is architectural terra cotta. No art critic who examines volume one, "The School," of the Architectural Terra Cotta Brochure Series, will question the truth of this statement when he observes the interesting, well designed and thoroly appropriate architectural ornament shown here as applied to a wide variety of schoolhouses.

While the pamphlet is modestly proclaimed to be an advertising document for the National Terra Cotta Society of New York, and will be sent, gratis, to any school official or architect who asks for it, it is in reality an architectural exhibit of the best in American schoolhouse design and construction. It includes an article by Dr. Fletcher B. Dresslar, author of "American Schoolhouses," on "The influence of School Architecture on the Community" and a brief description of the advantages of architectural terra cotta in public building design.

A portion of the book is given up to ten suggestive building exteriors and to descriptions, sketch floor plans and detail drawings of terra cotta ornament of the same. These plans are more valuable for their exterior designs and for their ornament than for the floor plans, and should be particularly suggestive to architects who are seeking unusual treatments for their designs.

CATALOG OF STEEL PRODUCTS.

Someone has well said that "safety and permanence" are the watchwords of modern building design and construction. The truth of this statement is impressed upon a prospective building owner by the examination of an interesting catalog like that just issued by the Henry Weis Cornice Company of Kansas City, Mo. It evidences on every page that the day has gone by when expensive business or school buildings can be equipped with anything but fireproof materials and can be fitted with anything but steel sash, metal fireproof doors, steel roof ventilators, non-corroding metal skylights, etc.

The catalog includes illustrations, measured

drawings and descriptions of Weis steel, casement, sliding and pivot sash; counter-balanced, pivot hinged and double hung fireproof windows; non-corroding metal toilet room partitions, etc. A special section is devoted to steel ventilating accessories. These include adjustable diffusing dampers, ventilated elbows and frames, roof ventilators, louvre dampers and similar specialties.

Copies of the catalog will be sent to school authorities upon request.

NEW EDUCATIONAL RECORDS.

The Victor Talking Machine Company lists in its current catalog of talking machine records the following special school records:

Singing Games—Looby Loo, Oats, Peas, Beans and Barley Grow; The Needle's Eye and Jolly is the Miller. These four game melodies are on a ten-inch double record and constitute four of the best known game melodies used in the American schools.

A second record contains four of the best kindergarten games and includes:

Let's Chase a Squirrel, How Do You Do, My Partner, The Muffin Man; Soldier Boy and Did You Ever See a Lassie.

The third record is a dance record for field-day use. The music consists of the Larkspur Mazurka and Jolly Crowd both by Stecher.

BUILD NEW FACTORY.

The Holtzer-Cabot Electric Company has begun the erection of a new plant in Roxbury, Boston, to permit the concentration of the manufacture of its several lines under one roof. Since the firm first began making electrical devices in 1875, the electrical industry has emerged from the crudest beginnings to one of the most important branches of American manufacturing. The Holtzer-Cabot Company has similarly grown from a very small beginning into one of the big New England enterprises.

Ground for the new plant was broken on May 21st by President Holtzer and the work is being rapidly pushed. It is expected that the large six-story building will be completed in the spring of 1915.

DONORA ELEMENTARY SCHOOL.

(Concluded from Page 25)

The sanitary equipment of the building is of the finest. The toilet rooms are placed in stacks. They are centrally located in the basement, on the first floor and on the second floor. Vitreous china fixtures have been used thruout and sanitary bubblers are located on each floor in the corridors.

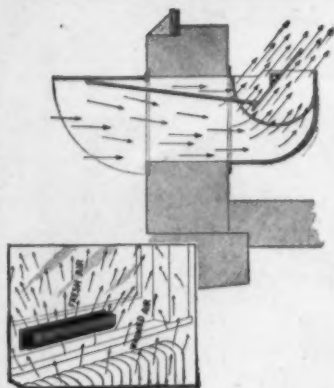
The heating and ventilating apparatus is of the single fan, hot-air type and is located in the center of the building. In use it has been found to afford an even distribution of heated air at a remarkably low cost.

Among the interesting features which have been introduced in the building is the use of glass panels in the classroom doors which not only give light to the corridor but enable teachers and principal to control the discipline in the corridors at all times. Instead of the usual cloakroom system the basement corridors are lined with steel lockers for storing books, clothing, etc. A complete automatic, electric clock and program system has been installed for handling the classes. A vacuum cleaner has been located in the basement, guaranteed to make possible the cleaning of each classroom in a maximum of nine minutes' time.

The exterior of the building, while extremely simple, is thoroly scholastic, characterized by absolute honesty, simplicity and appropriateness of materials. The exterior walls are faced with dark Devonshire brick and are trimmed with stone. The entrances are of cut stone and, while extremely simple, are graceful in outline and accent the two facades of the building sufficiently to relieve the plain expanse of wall and classroom windows.

The architect of the building is Mr. Conrad C. Compton of Donora.

15,000 Cu. Feet Air Per Hour Thru One Packer-Rekcap School Ventilator



THE SMITHSONIAN WAY

Many School Officials
Endorse Natural Ventilation
Packer-Rekcap Ventilators
Show Highest Efficiency by
Official Test and Actual Service
From Smithsonian Institute
Vol. 40, No. 23 (Just Off Press)

"We conclude that rooms should be heated by radiant heat and ventilated by cool outside air and the condition of a spring day—sunlight and cool breeze—approximated as near as possible."

Give the "Little Ones" the Best
Cut Down the "High Cost of Ventilation" by Installing

PACKER-REKCAP VENTILATORS
Federal Sign System (Electric)
640 West Lake St. Chicago, Ill.
Samples, Prices and Further Information
on Request

DO YOU INTEND BUILDING?

SEND FOR FREE COPY OF ARCHITECTURAL TERRA COTTA (Brochure Series)

VOLUME ONE - - - - - THE SCHOOL

This Booklet contains many helpful suggestions on the economical use of a permanent material in the building of the small school beautiful.

National Terra Cotta Society
Metropolitan Building, NEW YORK CITY

LABORATORY MATERIAL

for the Teaching of

AGRICULTURE

also for your specimens of

ROCKS, CLAYS, MINERALS, ALLOYS, SOILS, Etc.

Mounted or Unmounted in large or small quantities. Grains in the Head or Threshed Lots, Classified or not. These are in addition to our Natural and Commercial Science Collections that are known the country over.

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NATURAL SCIENCE COMPANY Inc.
CARTHAGE, Missouri, U. S. A.

"Satisfaction or your money back"

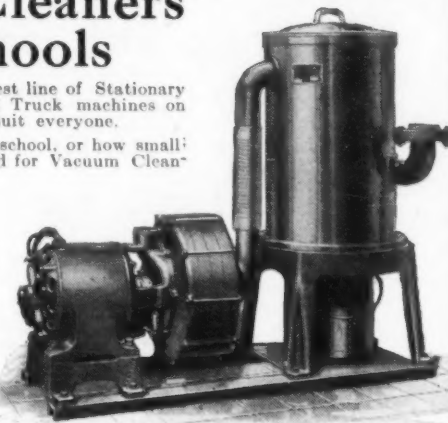
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CONCENTRATION OF BUSINESS FUNCTIONS IN PUBLIC SCHOOL ADMINISTRATION.

(Concluded from Page 10)

results outside the scope of definite measurement are superior in quality to those obtained in school systems in which no standards of measurement are applied.

A study of the tables prepared by Strayer and Thorndike for their "Educational Administration" shows elementary school costs per pupil ranging from less than \$9.00 in some cities to more than \$55.00 in others, while in the same group of cities where the total cost per pupil is about the same, there is a wide difference in the cost per pupil in the items that go to make up the total cost. Particularly is this true of the expenditures for such things as fuel and repairs. This wide variation may be due to different physical conditions or lack of proper management. The fact that there is a wide difference proves conclusively the need of a system of cost measurement, and with it the necessity of a uniform basis of calculation.

Until a comparatively recent date, school reports were meager in the extreme. Expenditures were grouped under headings of "salaries," "supplies," "repairs," "sites and buildings," with all other expenditures classified as "miscellaneous expenses," while the total enrollment and average attendance constituted about all that was shown on the school records relating to the constituency of the schools. In these days of various educational activities, there has developed a demand for information as to unit costs and for the compilation of such records as will show to what extent the opportunities

are being utilized. Furthermore, the people, especially those interested in school work, want statements of facts indicating just comparisons with other school systems.

Over two hundred million dollars are expended annually by city school systems, and, as Dr. Claxton, United States Commissioner of Education, has pointed out, "doubtless thousands of dollars might be saved each year, if each city knew the proportion in which other cities are distributing their money among the various school activities and the unit cost for each activity." It would seem that efficiency and economy require the concentration of the business control of the educational departments under a responsible head, to the end that the schools may achieve their complete development and fruition under the pedagogical directors.

A VILLAGE GRADE SCHOOL.

(Concluded from Page 23)

cial's office there is a bellboard which operates bells in all rooms. A telephone system is installed so as to connect the principal's office with boiler, assembly, stage ante-room and first and second story halls near the center of the building.

In each hall, thruout each story of the building, are two sets of full size hose, etc., and there are fire gongs in the halls of every story and the auditorium, which can be operated from several parts and can also be rung from the switchboard in the principal's office. There are two large recess gongs on the exterior of the building.

The style of architecture is Renaissance. The exterior of the building is of Buff Tapestry

brick, trimmed with a light-gray brick and Indiana limestone.

The cubical contents of the building are 377,000 cubic feet. The cost complete, including furnishings and equipment, is \$56,000. This makes a cost of fifteen cents per cubic foot, completely equipped and furnished. The building has a seating capacity of 360 pupils, exclusive of auditorium and gallery, which have a seating capacity of 459 people.

The architect is Mr. Charles Granville Jones of New York City.

A COMMUNITY CENTER.

(Concluded from Page 27)

been finished in pressed brick and cut stone. The construction is semi-fireproof; the foundation and basement walls are concrete and all the bearing walls are brick. The main trusses are steel and the stairs, corridors and boiler room are fireproof. The plumbing is of modern school type and the heating is vacuum vapor. The sanitary installation includes a vacuum cleaner. The lighting is electric.

The building was designed by and erected under the supervision of Messrs. Osterman & Siebert, architects, Walla Walla, Wash.

DR. WILLIAM RULLKOETTER: TEACHER.

(Concluded from Page 20)

Therefore, I wish to pay this tribute to Dr. William Rullkoetter. His fine personality, the simplicity of his life and of his faith, his overmastering ambition to do simple and unheralded service have been to me a constant source of inspiration and joy.

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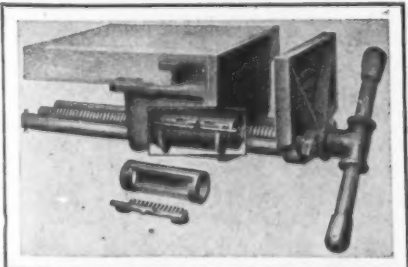
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Book Reviews

Teaching the Common Branches.

By W. W. Charters, Dean of the School of Education, University of Missouri. Cloth, 355 pages. Price, \$1.35, net. Houghton Mifflin Co., Boston.

This book is a very successful attempt to present to students of education and teachers in the elementary schools the fundamental facts of the theory of teaching as they may be applied in everyday classroom work, particularly in the country schools.

As the title suggests, the book discusses only the teaching of the common branches—spelling, penmanship, language, grammar, reading, geography, history, arithmetic and the now also common subjects of music, handicrafts, civics, physiology and agriculture. The author presents each of these subjects in a separate chapter explaining the subject-matter, motive for study, methods of study and class mechanics. He adds references for class reading and a series of class questions to each chapter. Finally, he takes up in a general discussion, in the last chapters of the book, all of the principles which underlie the selection of subject-matter, motives, recitations, assignment of lessons and study and sets them forth in a practical everyday manner. It is refreshing, in these days of scientific educational works, to read a book which, while essentially scientific, is simple and interesting in its form of presentation. The author has evidently not forgotten his own experiences as a country school teacher and has shown that he is "a teacher of teachers" by speaking sympathetically to the beginners whom he would reach.

A Handbook of Opportunities for Vocational Training in Boston.

Edited by Thomas C. McCracken. With a foreword by Dr. Snedden. 301 pages. Price, \$1.25, net, postpaid. Issued by The Women's Municipal League of Boston.

This handbook is the first attempt to list, analyze and cross-index all of the wonderful opportunities for vocational training—for the industries, professions, trades and commerce—to be found in the schools and colleges of an American city. It has been well said that there is a greater variety of opportunities for earning a living in the United States, than ever before, for those who are prepared to grasp them. The difficulty in the past has been to find adequate means of preparation in schools and shops and, while much of this difficulty is still to be solved, a great wealth of helps is at hand in every city for those who are ready to study and work. The present hand book does a service of incalculable value in that it tells definitely what Boston can offer to her young people, where parents may place their children to prepare for definite occupations, where persons already in the trades or in commerce may go for additional instruction. While the volume is of use immediately only to people in the Boston district it forms a suggestive model which every large city ought to follow in indexing its own vocational opportunities.

Essence of Astronomy.

By Edward W. Price. 207 pages. Price, \$1.00. G. P. Putnam's Sons, New York and London.

Things Every One Should Know About the Sun, Moon and Stars is a sub-title of this compact, well-arranged volume. It is such a pity, if not a disgrace, not to know something of astronomy, without doubt the oldest of the true sciences, that a book readily available for quick reference use as well as for consecutive reading, will be a boon to the uninformed. For obvious reasons the solar system has the place of honor; indeed, an individual chapter is devoted to the sun and each of the great planets in this system. A novel but practical scale is given to show the proportions of the solar system.

Those who invariably read in our leading magazines all the advertisements of the new books will linger over the bibliography. Here, following each title is a short note, giving an idea of the scope of that volume. Others may be more interested in a tabulated chronology of the main events in the history of astronomy. Back, back these dates go to years previous to the fifth century, B. C.

The full-page illustrations are from photographs and drawings taken at Yerkes and other great

observatories. The drawings of Mars, latterly so closely studied—were made by Professor Lowell in January of this year.

City School Supervision.

By Edward C. Elliott. Cloth, 250 pages. Price, \$1.50, postpaid. World Book Co., Yonkers, N. Y.

This book is the latest volume of the "School Efficiency Series" and includes the author's report of his investigation of school supervision as it exists in New York City. The study was made as a part of the recent school survey and, while it was naturally subjected to some criticism, it must generally be considered to be accurate in detail, thoro, highly professional in its basic considerations and entirely workable in its recommendations. Nowhere have we seen a clearer statement of the functions of school supervision, or the principles which must necessarily enter into the details of the organization of a supervisory force and of its relations to the other factors in the administration of a city school system. The schoolman who is seeking suggestions for application to his particular school system, and to his own work, will find much to ponder on in the chapters on determining teaching efficiency.

Of particular interest are the suggestions for a Division of Investigations of School Results and for a Supervisory Council of the Administrative and Teaching Staff. Dr. Elliott here includes a principle in school administration which is only just becoming recognized as a necessity where centralization of authority and responsibility has come thru the reduction in the size of school boards and the great increase in the personal power and responsibility of superintendents. He states very plainly and, we think, very correctly, that a highly centralized form of school administration cannot succeed very long unless there is effective co-operation and counsel between the teaching corps and the supervisory officers. This must be provided for in the rules of the boards of education so that there will be an effective interchange of views and a constant readjustment of methods and policies.

The series of appendices which have been added to the body of the book throw much light on the methods of the New York board in determining teachers' salaries, examining and appointing teachers and promoting them in the salary schedule.

Pinocchio Under the Sea.

Translated from the Italian by Carolyn M. Della Chiesa; edited by John W. Davis; with illustrations and decorations by Florence R. Abel Wilde. 201 pages. Price, 50 cents. The Macmillan Co., New York.

A well-known Italian nature study story is here presented in fluent English that preserves admirably the spirit and quaint humor of the original. American children will enjoy the strange adventures of the marionette, Pinocchio, among the monsters—large and small—of the ocean-bed. Mechanically, the volume is very satisfactory.

Shorthand Instructor.

A complete exposition of Isaac Pitman's system of Phonography. 313 pages. Price, \$1.50. Isaac Pitman & Sons, New York, N. Y.

To fittingly commemorate the centenary of the birth of the "father of shorthand," this improved edition of his chief work has been issued. The important changes made in the book consist, not in radical innovations in the system of shorthand itself, but in a thoro revision of the text and a new compilation of exercises. The purpose has been to simplify and clarify every detail. The idea of finality of form in every word given in shorthand is adhered to strictly.

The Business Letter.

By Ion E. Dwyer. 177 pages. Price, \$1, net. Houghton Mifflin Co., Boston.

The author of this book has recognized what no previous writer of textbooks on letterwriting seems to have discovered: "The letter is the great business builder of the present decade. With its extended use is coming a corresponding improvement in the style of writing—a style that is free from meaningless formality and full of life, clear and strong in its appeal to the reader."

Following the example of the best writers of business letters, the volume has been divested of the stereotyped, formal textbook style. The author has condensed the mechanics of letter-writing to a minimum and has devoted the larger space to a discussion of the subject matter of letters, examples and exercises. His purpose is to develop in students the ability to write in the style and the spirit of the actual businessman, to overcome the "schoolboy exercise" attitude of mind and to arouse an appreciation of the many controlling considerations which necessarily enter into important business letters. The usual forms of orders, acknowledgments, introductions, recommendations, etc., are given due attention, but the chief study is devoted to sales letters as the most essential form of commercial communication. Quite logically a section is devoted to the classification and disposition of telegraph and postal matter and to modern systems of filing letters and papers. In addition to sets of practice problems at the end of each lesson, a section is devoted to miscellaneous exercises based on the "morning mail" of an imaginary business house. The book can be heartily recommended to commercial high schools.

The Autocrat of the Breakfast-Table.

By Oliver Wendell Holmes. Edited with an introduction and notes by C. R. Rounds. 364 pages. Price 25 cents. The Macmillan Company, New York, N. Y.

An appreciative and all-round biographical sketch merits more than a passing notice. Mention is not only made of Dr. Holmes's long term of service as professor of anatomy and physiology but also of his earlier investigations and essays "which form a real and valuable contribution to the science of medicine." This side of his life work is often forgotten.

The notes explain phrases from foreign languages and allusions to persons. Owing to the number of these personal allusions the index will be particularly helpful.

The Magnolia Primer.

By Eulalie Osgood Grover. 128 pages. Silver, Burdett & Company, New York, Boston, Chicago.

For the pleasure and profit of children living in warm climates the reading matter in this primer tells of growing cotton, ripening oranges and blooming magnolias.

The aids and directions are similar to those given by the author in her other books.

How to Argue Successfully.

By William Macpherson. 111 pages. Price, 60 cents, net. E. P. Dutton & Co., New York.

A valuable little book for the general reader. It will be useful for teachers of English in supplementing instruction on argumentation and the arrangement of orations. The chapters on the principles of logic are clear and comprehensive.

Kidnapped.

By Robert Louis Stevenson. Edited by Arthur W. Leonard. 301 pages. List price, 35 cents. Scott, Foresman & Co., Chicago, New York.

A satisfactory reprint of Stevenson's best tale of adventure. The pedagogical apparatus is limited to a very brief introduction and to a few footnotes explaining terms that could not be readily found in ordinary books of reference.

Beyond the Pasture Bars.

By Dallas Lore Sharp with illustrations by Bruce Horsfall. 12mo, 160 pages. Price, 50 cents, postpaid. The Century Company, New York.

Still another series. This time it is the "Wild Life Series." A finer interpreter of wild life than Dallas Lore Sharp cannot easily be found. He has found more than one hundred wild birds and animals just beyond his own pasture bars. His keen, sensitive observation has enabled him to write delightfully of the crazy flicker, the shrewd opossum, the scolding chickaree and others every whit as interesting and individual. He implies that whether his readers live in city or in country, they have only to go beyond their own pasture bars to find a world of wild life. He says plainly the best thing this book can do is to show his readers "how to see and to hear and to know the wild things in the fields just beyond those bars."

Each chapter is almost an independent unit. Thus one may read intelligently of eclipses, or if mechanically inclined, may study the diagrams and text bearing upon astronomical instruments, without even glancing at the other chapters. But such readers would, in most cases, be missing a rare opportunity.

Shakspeare's the Tempest.

Edited by William Allan Neilson. 205 pages. Scott, Foresman and Company, Chicago, New York.

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The Tempest is one of the plays of Shakspeare included in the Neilson edition. In the introduction prominence is given to Shakspeare's influence upon the wonderful development of the English drama in the last quarter of the sixteenth century.

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Macaulay's Speeches on Copyright and Lincoln's Address at Cooper Union.

Edited by Charles Robert Gaston. 101 pages. Price, 25 cents. Ginn & Company, Boston, New York, Chicago, London.

Crises in history often find their truest expression in great public speeches. Were there not a word of comment or explanation here, young people could hardly do better than to read Macaulay's speeches for their stirring swing and wealth of allusion or the address of Lincoln for its accuracy, clearness, close logic. Still the fitness of this editorial work adds to the workable value of these speeches. The comments, topics and questions have a touch of originality. The notes are not lumbered with unnecessary information while the personal sketches tell much of the public service of these great men.

The Irish Twins.

By Lucy Fitch Perkins. 205 pages. Price, 50 cents. Houghton Mifflin Company, Boston, New York, Chicago.

Larry and Eileen are the Irish Twins. They do kindnesses to an old woman whose only son has gone to America, they act folk-tales, they go with their father to the bog to cut peat when a stray young pig is found. When grown this pig is taken to the neighboring fair and sold to help pay the raised rent. Rent has been raised because the tenant has improved the farm. A touch of economic conditions. The old woman's son returns to take his mother to America where "tis likely she never set her two eyes on Old Ireland again." This event gives the needed impetus to the other family and they, too, go

to better themselves. Another touch of economic conditions.

The Horace Mann Readers.

Second Reader. By Walter L. Hervey and Melvin Hix. 183 pages. Price, 40 cents. Longmans, Green & Co., Chicago, New York, Boston.

Teachers using this series have repeatedly asked for a reader suitable for use between the First and Second Readers. This book is the connecting link. Repetition, action, climax are marked features of the reading matter. The editors urge teachers to make regular use lesson by lesson of the phonic exercises, word problems which are given at the end of the book. It would seem that problems connected with teaching reading as well as those connected with teaching English, are always with us.

A Little Book of Well-Known Toys.

By Jenness M. Braden. Pictures by Margaret Hittle. Cloth, 105 pages. Price, 45 cents. Rand, McNally & Co., New York, N. Y.

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The Marking System in Theory and Practice.

By I. E. Finkelstein. 12mo, cloth, 92 pages. Price, \$1.00. Warwick & York, Inc., Baltimore, Md.

It is undeniable that great stress is laid by teachers and pupils upon marks as measures of attainment. It is also undeniable that marks given by different instructors in the same school, even in the same subject, show wide differences. It is claimed that the percentage system with 100 for a maximum and 60 or 70 as a "pass mark" is in all probability not the best system. If this be true, a change in the scale or in its use is more than desirable.

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A tabulation of marks should be given out at stated intervals, that every examiner may know how nearly he is living up to this system.

Modern Short Stories.

By Margaret Ashmun. 437 pages. Price, \$1.25. The Macmillan Co., New York, N. Y.

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Moliere's Le Bourgeois Gentilhomme.

Edited by Thomas Edward Oliver. 180 pages. Price, \$0.45. Ginn & Co., Boston.

This edition gives the full text of the comedy, including the "Ballet des Nations." The notes are unusually full with the intention that the text may be available for class use earlier in the course than Moliere is commonly read. There are several pages of useful vocabulary.

Phonetic Spelling.

By Sir Harry Johnston. 92 pages. Price, \$1.10. G. P. Putnam's Sons, New York, N. Y.; Cambridge University Press, London.

The teacher who wishes to study the latest suggestion for a scientific alphabet will find this book valuable. Certainly some such scheme as the author proposes, must eventually be adopted if the simplified spelling movement is to progress to a logical solution of our inconsistent, cumbersome and wasteful orthography. The author's "Ideal" alphabet is made up from the

best features of the alphabets of the International Phonetic Association, and of those of Volney, Lepsius and other workers together with a few original ideas of his own. It is claimed for the new alphabet that it will represent in Latin characters all of the European and Asiatic languages, and will serve equally well for the Amerindian tongues and the "click-studded" Bush languages of South Africa.

Eight Plays for the School.

By Frances Helen Harris. 148 pages. Price, 60 cents, net. E. P. Dutton & Company, New York, N. Y.

The title might truthfully have been "Eight Good Plays for the school," since subjects, plots, style render them highly suitable for school use. Six of these plays deal with interesting events in French or English history. In one, "The King's Escape," all the characters are historical. The dramatic yet natural dialogs and monologs stimulate acting.

Many practical directions for stage setting and costumes appear in the article, "How to Get up a Children's Play," of which perhaps the most important is the one—that there can scarcely be too many rehearsals.

Adrift on an Ice-Pan.

By Wilfred Thomason Grenfell. 68 pages. Price, 25 cents. Houghton Mifflin Company, Boston, New York, Chicago.

Heroism is the dominant note in these pages. What is told in the biographical sketch of Dr. Grenfell's forbears explains how honestly he came by his fighting strain. In trying to go sixty miles southward to save the life of a fisher-lad, Dr. Grenfell and his team became adrift upon an ice-pan. In simple, almost matter-of-fact language we are told of the twenty-four

hours' stay upon this small and crumbling ice-pan from which they were rescued by five fishermen. These men knew the risks they ran, but they went gladly. They were trying "to save the doctor and his life was worth many." One of the party has told the story of the rescue and its tone of simple bravery is thrilling.

Lovers of dogs should read every word about the dog team. They should not skip the fine tribute standing in the Labrador and the English home, in memory of the three noble dogs whose lives were given on the ice for their master.

A high authority has said, "He that loveth his life for my sake shall find it." In caring for the sick, providing hospitals, teaching wholesome living, promoting productive industries on the bleak coasts of Labrador, Dr. Grenfell has found his life.

TEXTBOOK NEWS.

The Kentucky Court of Appeals has recently handed down a decision in which the validity of the School Book law of 1914 is upheld. This act provides for state adoption of textbooks and excludes cities of first, second, third and fourth classes, whose boards will adopt the textbooks for their own schools.

The difficulties concerning the net contract and net retail price clauses of the law were clarified by adopting the retail price as the basis and making legal a 15 per cent commission instead of the arbitrary commission. The suit was brought in the Franklin Circuit Court thru attorneys representing a textbook concern, Andy Bowman of Fayette County, nominal plaintiff, and State Superintendent Barksdale Hamlett and Attorney General Garnett, defendants.

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Call to aid vocational guidance and its important allied subject—commercial geography. The two touch at countless points, for instance:

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Use books that have given new life interest to many boys and girls.

Vocational Guidance. By J. Adams Puffer, Author, Teacher, Lecturer. Price, \$1.25.

Commercial Geography. By Edward Van Dyke Robinson, of the University of Minnesota. Price, \$1.25.

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PHILADELPHIA

Black & Davis's Practical Physics (Macmillan) have been adopted for the high school at Spokane, Wash. The text represents the only new book adopted for the schools of Spokane during the ensuing year.

The Modern Arithmetic Series published by Lyons & Carnahan has recently been adopted by the states of Tennessee, Kentucky and Oklahoma. The books were written by District Superintendent Henry C. Cox, Chicago, Geo. A. Tallant and Fred H. Umholtz.

The series has been completed less than six months.

The United States Coast and Geodetic Survey has recently issued a complete list of charts, tables and reports which are available thru the Division of Publications of the Department of Commerce, Washington, D. C.

The charts and maps are particularly valuable for schools and colleges offering commercial courses, and may be had at cost price from the Division of Publications.

The elementary schools of the state of New Mexico have entered a contest based on Thompson's "Minimum Essentials" in arithmetic and grammar.

Textbooks for the rural schools of Tennessee have been adopted as follows: Haliburton's readers (Heath); Farm Life readers; Lyons and Carnahan's arithmetics; Tarr & McMurray's elementary geography (Macmillan); Dodge's advanced geography (Rand-McNally); Mace's Elements of History (Rand-McNally); Thompson's advanced history (Heath); McGee's History of Tennessee (Am. Book Co.); Hunt's speller (American); Scott & Southworth's grammar (Sanborn); Lippincott's physiology (Lippincott).

Naugatuck, Conn. First Principles of Chemistry (Allyn-Bacon) has been adopted for the high school.

The Virginia State Board of Education has voted to postpone the adoption of a new list of textbooks until January, 1915. The present books will be continued until the new contracts are signed and go into effect. The decision of the board is a result of the discovery of discrepancies in the prices of books in a number of states indicating that Virginia is paying higher

prices than prevail elsewhere. An investigation of prices and conditions of contracts will be made by a special committee and a study will be made of the Kansas and California state publishing schemes. Seven publishers, it is claimed, will lease their plates to the state, but a majority have refused finally to enter such an arrangement.

KENTUCKY STATE ADOPTIONS.

After a hot campaign in which every important book-publishing house in the country participated, the Kentucky State Textbook Commission adopted a series of books for uniform use. The list includes:

Cox, Tallant and Umholtz's arithmetics (Lyons-Carnahan); Ray's mental arithmetic (Am. Book Co.); Natural geographies (American); Baldwin and Bender's first, second and third readers (American); Graded Classics, fourth and fifth readers (B. F. Johnson); Mother Tongue language and grammars (Ginn); Gulick's hygiene series (Ginn); Evans's Primary History (Sanborn); Dixon's American History (Macmillan); Forman's Civics (American); Kincaid's Kentucky State History (American); Pennsylvania Writing (Educational Pub. Co.); Potter's speller (J. D. Williams & Co.); Birchard's music (Birchard & Co.). Supplementary books are: Braden's Number Primer (Educational); Wooster's primary arithmetics (L. E. Wooster & Co.); Farm Accounts (Laurel Book Co.); Fairbank's Home Geography (Educational); Bourne & Benton's United States Histories (Heath); Gordy's Advanced United States History (Scribner); Wheeler's Primary Speller (W. H. Wheeler & Co.); Nolan's Agriculture (Row-Peterson Co.); Free & Treadwell's readers (Row-Peterson); Elson readers (Scott-Foresman Co.); Wheeler's readers (Wheeler); Ideal readers (Rand-McNally Co.); Farm Life readers, four and five (Silver-Burdett); Arnold's With Pen and Pencil (Ginn).

Summer High-School Credits.

Upon the suggestion of Supt. A. C. Davis of North Yakima, Wash., the school board has put a high-school credit system into operation for

the summer. The credits will be given to students on the ranches in an attempt to bring the schools in closer contact with the leading industry of the community. The recommendations of Supt. Davis are as follows:

1. Students may earn one credit in agriculture toward graduation by work completed outside of school during the vacation period.
2. At least 250 hours of work must be completed before any credit will be given.
3. Complete records and systematic reports kept by the applicant, giving all information required, and signed by the parent or employer, shall be filed with the instructor in agriculture every two weeks.
4. Applicants shall secure such information as a result of reading, study and questioning experienced workers, as may be necessary to convince the instructor in charge that the work has been of sufficient educational value to justify the granting of a credit.
5. Pupils wishing to receive credit for this work shall make application for the privilege before beginning the work. Lists of reference books, kinds and character of note books, shall be designated by the instructor in agriculture.
6. An examination covering the work may be given by the school authorities.
7. Work may be done along the following lines:
 - a. Vegetable gardening work; keeping results of work done in complete form.
 - b. Feeding of stock, poultry, etc.; keeping records of foods used, amounts and results obtained.
 - c. Thinning, picking, packing, marketing, cultivation and irrigation of fruits, etc.
 - d. Eradication of blight, other orchard diseases and pests; complete records of attempts to reduce damage done by these causes.
 - e. Growing of cereal, grass or forage crops.
 - f. Keeping records of dairy animals; milk testing records for monthly periods.
 - g. Care of bees, handling of honey, etc.; complete records.

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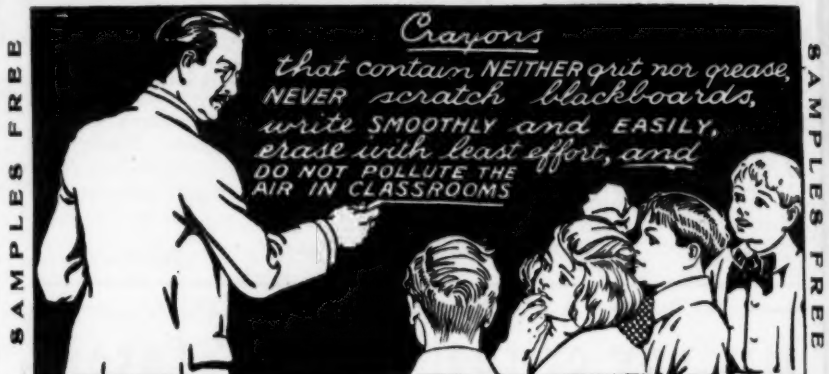
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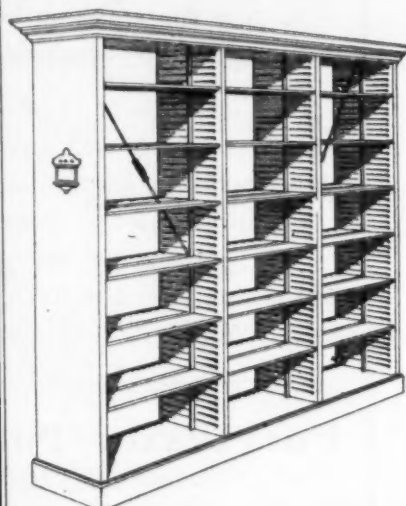
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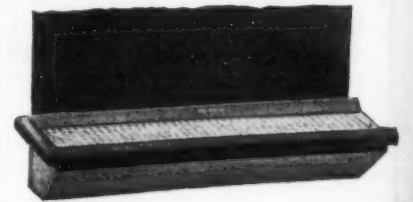
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STANDARD UNITS OF SCHOOL MEASUREMENTS.

(Concluded from Page 16)

normal and abnormal foundations which will be found very suggestive.

3. *Repairs.* The repair program constitutes one of the most perplexing of the problems. So many countless items enter into it that it is impossible to make headway unless some general classification is agreed upon. Perhaps the most satisfactory will be to assume a normal life for the buildings, say for example fifty years, and to charge off to depreciation each year two per cent of the value. Repairs totaling an amount equal to this two per cent may then be charged as a current annual expense. Any repairs made in excess of this are in fact betterments and should be added to the value of the buildings, because they develop the buildings to something a little beyond its normal value for that year.

4. *Operating.* It is also evident that some comprehensive unit must be evolved for measuring Operating Expenses. This may be done by classifying the expense, as indicated in the outline, and then combining all as a service charge and figuring from this the cost per pupil.

Instruction and Salaries.

5. *Instruction.* The advantage to be obtained by the adoption of a definite cost unit

for measurement in educational lines will be fully as great as in material lines. The items entering here are comparatively simple, consisting largely of: (a) Salaries. (b) Books, material and supplies.

So great is the variation in the length of school years, in the number of hours per session and the frequency with which particular subjects are taught during a given week or month, that no fixed unit suggests itself as more satisfactory than the cost per pupil per hour, or multiples of that unit. While this standard will perhaps not appeal at once to educators because it gives a first impression of too minute detail rather than of simplicity, the probability is that other cities will rapidly follow New York and Mr. Henry R. M. Cook in its use.

6. *Administration.* The same conditions apply to a satisfactory unit for measurement of Administrative Costs. No better has been suggested than the above.

7. *Social Center Activities.* The simplest and most satisfactory unit for cost of Social Center Activities is the cost per attendant per lecture.

* * * *

The most important point in the whole matter is that each accounting officer shall accept the

existing units of measurement until he can suggest and have adopted better ones, and that in all his publications he shall begin by clearly defining his premises and the unit he uses. If we can have a common understanding as to just what items of expense are included under a given heading, and just what divisor is used we will have no difficulty about our quotient.

There are three groups of officials who stand like the legs of tripod,—the United States Census Bureau, the United States Bureau of Education and the Accounting Officials of the various school systems. No one of these can stand alone—nor any two without the third. The school officials should therefore link up closely with the Census Bureau and the Bureau of Education and insist upon the use of uniform forms in both of the above departments.

A thing is never settled until it is settled right. A fine thing about mathematics and accounting is, that when a thing is once settled right it stays settled, so if we may but agree upon the terms upon which we shall measure our progress that progress is bound to be rapid. We may well keep in our minds and hearts those words of Mr. Roosevelt: "The most expensive crop is Ignorance and the best of all the crops is the children."



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SOME SCHOOL AFFAIRS.

(Continued from Page 13)

It is but natural that abstruse details are mistakenly presented in lieu of information of value by many such who place their ideas before the public. Without being acquainted or in touch with the school problem, they confidently and in all sincerity state what they believe to be true, and what they think may be useful. To this extent, their efforts may be justifiable, but, nevertheless and notwithstanding, it is rarely the case that the system—and suggestions as to systems—can be availed of for practical purposes.

Oftimes, discoveries are made and exploited, which have been obvious to every one engaged in school business from time immemorial. This does not militate against their truth as facts, but their age and antiquity are apparently unknown to the discoverer who confidently believes that he has benefited the cause of education by uncoffining them. They are new to him, then why should they not be new to every one else and why should not every one applaud the discovery and, incidentally, the discoverer?

However, there is room for improvement in the matter of cost accounting in public school systems. The subject should be viewed from the same angle by all, but unfortunately, this is not always the case.

Confusion in Segregation of Accounts.

An accurate fund accounting is quite general, but the separation of expenses under their true functional classifications, is more the exception than the rule. When we examine the reports of many school systems, we find that statistics of cost are sadly confused. Many evidence the fact that their compilers failed to discern that there are natural and definite channels of expense leading ultimately to "costs" of

different kinds. If the principles of educational cost accounting are not fully understood or appreciated, it is not surprising that unrelated expenses are frequently combined, and divided by some factor of attendance, the resultant cost being unscientific, nay, even hybrid, and of little, if any, value.

Purely educational cost is simple to compute, as it contains in essence only those items of expense which purchase or procure education, teachers' salaries and educational supplies. But how frequently do we find this cost combined with the cost of operation or of maintenance of the educational physical plant, one or the other and frequently both. How often do we find the cost of seating a pupil (capital outlay) included in the annual cost of educating a child?

If we are to produce "costs" of any value for administrative purposes, they must be distinct and comparable, and they must follow natural lines and functions.

There are some six classifications, or natural divisions of costs:

1. Educational cost.
2. Capital outlay.
3. Maintenance of plant.
4. Operation of plant.
5. Administration—professional control.
6. Administration—business control.

To which may be added a seventh item, comprising these items of special character, such as special activities of auxiliary nature, which are frequently placed under the charge and jurisdiction of boards of education, especially of those of large cities.

Some theorists have advocated the distribution of some of these natural "costs" and their combination with others. All that they arrive at in the end is an arbitrary assumption or local-

ization of expense, but not the actual fact expressed as a true cost. Further than that, the natural function, or classification, thus becomes submerged, and its direct bearing on school affairs is lost to sight, as well as its comparability, with similar expenses of previous years.

Depreciation in School Plants.

Again, there are some who advocate the introduction of the elements of "depreciation" and "appreciation" into school cost, with the result that capital outlays or costs are soon lost in attempts to establish intrinsic values. A moment's thought should be sufficient for any school administrator to realize that school systems are not in existence for the purposes of gain, as in the case of commercial business. Therefore, of what avail is it to write up or to write down the assets represented by the school plant? *Cost* and "intrinsic value" are not synonymous terms in school business.

In mercantile business, the plant is used operatively for the purpose of producing a profit for the proprietors of the business. A machine may be worth its cost in a factory, just as long as it is the best of its kind, but it may be scrapped in a few years by reason of its decreased usefulness and output when compared with, and supplanted by, a more modern and a better one. Hence, the reason for writing off "depreciation" for this contingency, as well as for deterioration. *In school systems, depreciation may be considered as offset by adequate upkeep or maintenance.*

A school plant, or building, may not be the equal of another, but who will be bold enough to assert that the quality of the educational output from an old-fashioned structure is any better or worse than the education imparted in the most modern steel and concrete structure.



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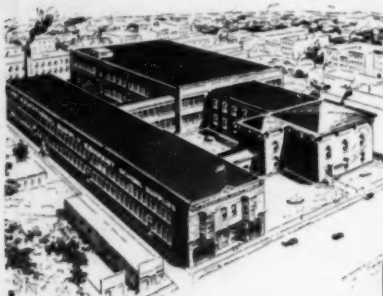
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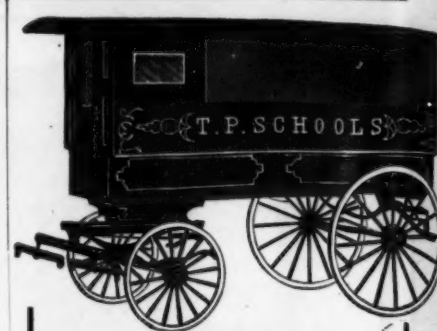
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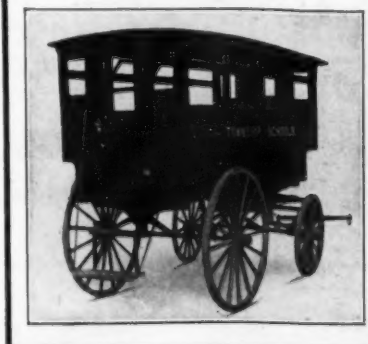
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Sometimes the old building puts forth the best results, but the educational output is not so much dependent upon the age or style of the building as it is dependent upon the efficiency of the teachers within it. Then why artificially depreciate the "cost" or "value" of the older building and disturb the ratio of related expense? In a school system, this leads to statistical fiction and to an improper angle of vision.

I have frequently listened with attention to the views of some on the subject of "life of a school building" and have been almost led to believe that a school building has disintegrated and almost disappeared in twenty-five or thirty years, but the fact remains that it may still stand and give good service. The expert on depreciation will have disposed of it in that time, and if it is a decent, orderly and graceful school-house, it will then have disappeared as an asset from the books of the school board and possibly from human sight "like the baseless fabric of a vision leaving not a rock behind."

I believe in the principle that school property is worth its cost, as long as it exists and is capable of fulfilling the function required of it. When it ceases to exist in substance or in usefulness, then it should be removed from the books as an asset.

Progressive Development Needed.

I do not want you to think that, because I have criticised some theorists and their empirical work, I am condemning the efforts of all, but I do want to point out to you a few popular fallacies in order that you may perceive the difference between the impractical and the useful. Lord Kelvin once remarked that the value of science lies in its practical application. So, therefore, I consider that the

spreading of false theories is wasteful of valuable time, because the unwary may be led to experiment with them, only to find ultimately that they are useless, when applied in a practical sense. It does not follow that, because a man writes a book, his views are better, or even as good, as those of others who may not have essayed to publish their knowledge. Neither does it follow that everything that is found in a printed book is correct. The author's dictum may be entirely wrong. In fact, it may not be worth the paper upon which it is printed. I am in favor of logical and progressive development—you may call it "efficiency," if you so desire—but I am just as much opposed to the tendency of the times to make changes for the sake of making changes, without principle or scientific basis. Evolution and orderly progression are thus subordinated to revolution and to confusion. This is one of the great dangers and ills from which many of our school systems are suffering.

The schools of today are different from those of a dozen years ago. The public demands more than before. Education for good citizenship will always continue, but it is now supplemented by other things. Education which will enable every pupil to become an economic social unit is the demand all over the world.

And so our schools today are imparting knowledge along a variety of lines—lines little thought of ten years ago, and lines not even dreamed of a quarter century ago. These extra activities are increasing in number and the public demands (at times somewhat critically) to be informed of the cost of these innovations. The public is not yet wholly convinced of their usefulness or of their desirability.

The human mind, in contemplating any proposition or subject, seeks naturally some standard of comparison, or some method of measurement. It does not accept, as a matter of course, everything that is placed before it. The longer we live, the more people do we find asking "the reason why." This does not necessarily imply distrust or scepticism; neither is it idle curiosity. I think that it means that the human mind has become more acute, and better able to deal with and to consider things that affect the common weal.

And can any subject of public interest be much greater in importance than the progress of education?

I have referred before to the propensity of the human mind to seek comparison, when viewing new matter. The mind of the average person not engaged in strictly educational pursuits will almost involuntarily first think of the cost of any new educational activity. As a commercial nation, and as a nation of practical people, we are prone to weigh the usefulness of nearly everything, including education, by its "cost." Desirability, quality and quantity are nearly subordinated to the factor of "cost."

There is a degree of relativity between all phases and kinds of education. Some features are cheap, in the sense that they cost little money. Others are cheap, because of their enormous practical value in after life, and may cost much money. Some activities produce similar educational results, but are conducted under different auspices and conditions, as, for instance, the teaching of the regular branches in day and evening schools,—many others could be mentioned. However, there is a strong tendency to high cost, in conducting special activ-

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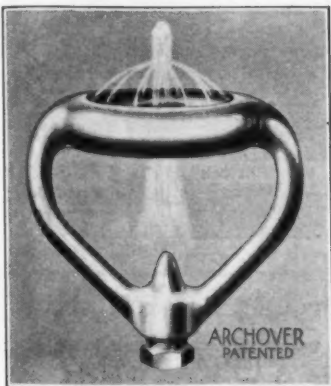
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ities, and also in conducting normal activities under special conditions. By establishing the degree of relativity between all activities, i. e., by reducing them to a comparable basis, and to a common basis of cost, we can form some tangible idea of their value, bearing in mind their quality or educational importance.

I have advocated for the last few years, the reduction of all activities to the basis of "cost per student hour." I think that I may say that the production of such figures has done quite a little towards showing the relative value of many phases of education. I think that it has also had a slightly restraining influence in the matter of high costs of special activities. When confronted with cold figures of cost, those in control have tried to be more economical, either by expending less money, or by securing greater efficiency and a larger volume of educational results than formerly.

I think it is a plan worth trying in any school system, great or small. The labor of obtaining relative "costs" in this way is not great. The method represents a check which may be placed by the business administration upon the educational control of school systems.

The function of the educator is to educate, but only too frequently can it be found that the desire on the part of the educator to perform his function well is accompanied by the concomitant of high cost, unless the fact is constantly placed before them. This kind of a check is a healthy one, provided always that the quality of education be not impaired. It is by co-operation of this kind between the business and the educational branches of the school system that the greatest efficiency will be secured. The community will always give freely

of its substance for the purposes of education, but it has a right to expect, and to demand, that its liberality in this respect shall not be mis-used by careless extravagance or by faulty administration.

VISUAL INSTRUCTION AND ITS MANAGEMENT.

(Continued from Page 18)

loose use of many pictures tends even to make effort to acquire knowledge seem irksome. The end of visual instruction is the formation by the learner of a mental picture corresponding to some objective reality. To reach this end, undoubtedly, certain well defined mental steps must be taken. The eye is only the physical agency thru which the mind is impressed. The method of using pictures should be as fully and carefully worked out as laboratory practice in biology and physics, or a phonic method of teaching reading.

Such a method must be based on the thought that a picture merely takes the place of the thing represented and should be observed very much as the thing for which it stands would be observed. An observation must be particular. True observation cannot be general or vague. Careless observation leads to loose thought. Just as in the laboratory, the pupil should be required to make the attempt to state with precision what he sees. In doing this, he tends to define his ideas and show his instructor the character and extent of the observation. At the proper stage of the exercise some explanation or conclusion should be reached and stated as to the significance of what has been observed. In the pedagogical use of pictures, impressions will be clear and vivid and expression will follow impression. There must be a mental re-

action on the part of the individual. An exercise thru the use of pictures should not be allowed to run into a mere entertainment, unless entertainment is the end in view. Results should be tested.

It is evident, then, that, except in educational extension work, the formal illustrated lecture should have a small place. For immature pupils an illustrated lecture is to be preferred to an unillustrated one, but the lecture method is not well adapted to their needs. It is only as the individual "studies" a picture that any large result can be gotten from it. Showing pictures at the rate of one a minute is more entertaining than educative. An educational aid does not lose anything in value from having its limitations clearly understood.

NEW "VICTOR" CATALOG.

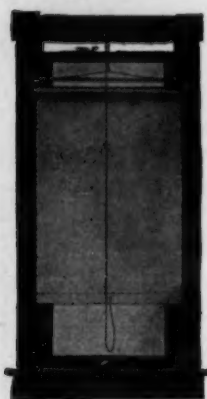
A new catalog of motion picture projecting apparatus, illustrating and describing the "Victor Animatograph," has just been issued by the Victor Animatograph Company, Davenport, Ia.

The Victor Animatograph is declared to be the first professional portable instrument, arranged for standard film. It is equipped with a socket-attached arc lamp, drawing current from any incandescent lighting circuit. It is, therefore, particularly adapted to use in schools and churches where brilliant effects are required but where special wiring for arc lights is not available.

The manufacturers declare that the Victor Animatograph has been so simplified that any intelligent person can operate it without especial instruction.

Copies of the catalog will be sent to any interested person on request.

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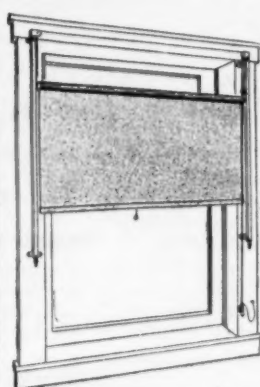
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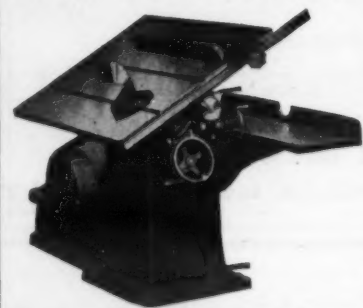
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THE SELECTION OF EQUIPMENT FOR PHYSICS AND CHEMISTRY LABORA- TORIES.

(Continued from Page 15)

when it comes to buying small articles they meet objections. In running a physics or chemistry laboratory we need a large number of little things which cost only a few cents, but in the aggregate run into dollars. Some of these articles are: salt, ice, vinegar, milk, nails, kerosene, twine, sugar, baking powder, gunpowder, sheet lead, cloves, glucose, shot, labels, beeswax, paraffine, nuts, candles, iron filings, etc. Ten or fifteen dollars will usually buy all that an ordinary school can use in a year or two.

When ordering apparatus or chemicals from supply houses be sure that you make your wants clear. Study your catalog and order by catalog number or quality of chemical with the price of the article, for example:

Cat. No. 657—2 Three-string sonometers at
\$9.00 \$18.00
2 pounds—Sodium hydroxide sticks pure by
alcohol at \$0.55 1.10

Spare no pains to make yourself clear and you will usually get what you order. Always keep a copy of all letters and orders sent to apparatus firms, so that in case of error on their part you have your original order.

Another common mistake of instructors in physics is to overdo some subjects and neglect others. Most schools overdo the subject of heat and electricity at the expense of sound and light. The theory of wireless telegraphy receives more attention than the theory of the lenses used in optical instruments and spectacles. The principles of the piano are ignored, because the stu-

dent has spent too much time finding the latent heat of vaporization of steam. See that the selection of apparatus is wisely apportioned thru all the various fields covered by the subject of physics.

What to Buy.

When it comes to enumerating apparatus which may be used in the teaching of physics, I might make a list including every mechanical device from Archimedes' Pump to Edison's latest Storage Battery. The interests of the community and the inclinations of the instructor will decide largely what experiments are to be done in any particular school. A model Ocean Liner and an Assay Furnace will appeal to boys in New York City differently than in Colorado Springs. A live teacher will soon have his department fitted with apparatus suitable to his community. Almost every scientific apparatus catalog contains detailed lists of apparatus suitable for different sized classes. Every school board member should have several of these catalogs, so that he may judge as to price and quality of apparatus desired by the instructor. Before you buy a static machine and camera, be sure that you have plenty of spring balances, weights, thermometers, voltaic cells, tuning forks, electric bells, meter sticks, pulleys, lenses, bar magnets and other articles too numerous to mention. Many articles used in our physics laboratory were made by our manual training department pupils. As a matter of fact, our first manual training class was composed of boys from the physics department. This was about seventeen years ago when the school was small and the amount of money allowed for

laboratory apparatus still smaller. Usually, however, homemade apparatus is crude and inaccurate and instills carelessness in the work of the pupil. A physics laboratory should have a full set of tools, such as hammers, screw drivers, saws, planes, pliers, wire cutters, files, soldering irons, knives, nails, screws, staples, brads, tacks and rivets. As I have said before, a physics laboratory is never complete, if the instructor tries to keep up-to-date in his subject.

Chemistry, on the other hand, is more uniform. Below is the list of apparatus which I give to each of my fifty pupils in chemistry at the beginning of each year. It seems to contain enough to perform all the experiments required in a one-year course in high school chemistry. Of course, there are many pieces which are used once or twice and returned to the instructor as soon as the experiment is completed.

Chemistry Laboratory Equipment.

Your drawer should contain the following pieces of apparatus:

Glass and Porcelain.

- | | |
|--------------------------|---|
| 1. 12 test tubes. | 14. 1 side neck flask. |
| 2. 1 ignition tube. | 15. 1 glass spatula. |
| 3. 1 funnel. | 16. 1 crucible. |
| 4. 1 funnel tube. | 17. 2 evaporating dishes. |
| 5. 1 graduate. | 18. 1 mortar and pestle. |
| 6. 1 tumbler. | 19. 4 glass bends. |
| 7. 3 beakers. | 20. 2 pieces of glass tubing. |
| 8. 4 wide mouth bottles. | 21. 3 vials for borax, red and blue litmus paper. |
| 9. 4 glass plates. | 22. 1 casserole. |
| 10. 1 blue glass plate. | |
| 11. 1 watch glass. | |
| 12. 1 stirring rod. | |
| 13. 1 Erlenmeyer flask. | |

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| 23. 1 sand bath. | 32. 1 2-hold rubber stopper. |
| 24. 1 wire gauze. | 33. 4 pieces rubber tubing. |
| 25. 1 blow pipe. | 34. Filter paper. |
| 26. 1 platinum wire. | 35. 1 charcoal. |
| 27. 1 pair forceps. | 36. 1 pipe stem triangle. |
| 28. 1 file. | |
| 29. 1 test tube brush. | |
| 30. 1 test tube holder. | |
| 31. 1 test tube rack. | |

Chemicals.

When it comes to selecting chemicals for the average high school laboratory, there is no hard and fast rule to follow. In this selection, the judgment of the teacher has to be taken almost as final, if he is to secure the best results with his apparatus and laboratory manual. Just because the members of the school board can see no use for manganese dioxide is not a good reason for not adding it to the list of chemicals required for first-year elementary chemistry. One teacher recently told me the following experience: He asked, among other things, for five pounds of plaster of paris and found that the board had drawn a line thru the item. In his next list, he asked for six pounds of calcium sulphate, dehydrated, and it went thru safely. Let me give a few rules to follow in buying chemicals for a class of from fifty to seventy:

1. To buy as many commercial articles at the local drug store and grocery as possible, such as borax, sal soda, baking soda, water glass, chlorate of potash, sulphur, turpentine, table salt, potassium iodide, hypo, ether, chloroform, chloride of lime, etc. I also let the local dealers bid on my lists of more uncommon chemicals,

and if they can furnish the same goods at the same price, I can see no purpose in sending the order out of the city.

2. It is not economy to buy large amounts of expensive and little used chemicals. When I came to Rockford in 1903, I found a one pound and five pound bottle of ammonium oxalate. I am still using from the one pound bottle and expect to do so for several years yet. I find that one ounce of many chemicals lasts us three or four years. Sit down and talk these items over with your instructor before you approve or cancel his requisition.

3. Sulphuric acid, hydrochloric acid and distilled water should be bought in large carboys and should be chemically pure. I have found by actual gas and water meter tests, that it is cheaper to buy distilled water than it is to make it with a small laboratory still. Concentrated ammonia and chemically pure nitric acid are best bought in five pint bottles. The ammonia loses its strength, while nitric acid is so little used that a carboy lasts too long for economy.

4. I always try to have one or two compounds of every common element in a C. P. condition, or at least with the analysis given on the bottle. This enables the instructor to do a little qualitative analysis and work with the spectroscope. I find that these chemicals add more to the dignity of the laboratory than any other one thing I have. Pupils respect accurate results and take pride in securing them. Right along this line might be mentioned a collection of minerals and ores. It is very instructive to show the class the "back to nature" source of

sulphur, iron, arsenic, red lead, mercury, silver and radium. Give some of the pupils who get ahead in their work small samples of these minerals to test for sulphur, iron, copper and tin and the interest is intense.

5. The money value of a case of chemicals is not very much, when compared with other school expenses. Often times the case represents more of a money outlay than the chemicals it will hold. When you consider what a class can learn from four ounces of silver nitrate, it should not be denied them because it costs about three dollars. Possibly, they can learn as much from a pound of green vitriol costing five cents, but not the same lessons by a long way. As in all these matters of equipment, hire a capable man and then trust to his judgment and common sense in spending the taxpayers' money.

Where to Buy.

Buy as much as possible from your local merchants. They pay taxes to support the laboratories. They buy football tickets, advertise in the school paper and attend the school lectures and entertainments. Very often they will give a liberal discount in order to get the business. Hand the different dealers a list and let them bid on it.

What apparatus and supplies you buy out of town, get from a reputable firm. Never buy the cheapest or smallest article listed. Buy everything with the privilege of returning unsatisfactory articles.

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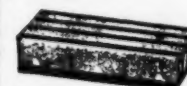


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should be imported duty free thru some reputable apparatus firm. To make it pay, you will have to order in lots of fifty or more, except the more expensive articles. Figure out about how many test tubes, evaporating dishes, beakers and flasks you will use in the next three or four years. Send the list to three or four firms, asking for duty free prices. You will be surprised at the low figures you will get. It takes from two to five months for an order to reach you. I usually send my September order to the firm in March or April.

Five Recommendations.

In conclusion, I have this to say:

1. For your physics and chemistry teacher, hire a man who is interested in your community and its varied industries, so that he may teach your children to love their town or city.

2. Give him pleasant rooms to work in and let him furnish them so that they will be convenient.

3. Buy only the best of apparatus and supplies and sufficient of them to allow every pupil to work at the same experiment at the same time.

4. Have a definite appropriation for each subject, so that the instructor may plan at the beginning of the year what he may expend. After you have your laboratories fairly well equipped an allotment of five dollars for each chemistry pupil and two dollars for each physics pupil will keep these two laboratories running nicely, if the instructor is economical.

5. Lastly, when you get a good instructor keep him as long as you possibly can. Treat him as a manufacturer does a good foreman. Increase his salary, improve his equipment, place confidence in him when he asks for new apparatus or a change of textbook, give him

more responsibility and you will soon have a physical-science department which will be a credit to your city.

OVERHEAD COSTS.

(Concluded from Page 10)

cent, while the new forms added bring the total increase up to 35.1 per cent.

During this period the increase in total expenditures was 16.6 per cent.

It therefore appears that during the five-year period the cost of administration increased between five and six times as fast as the day school population and more than twice as fast as the evening school population, while the cost of professional control increased between seven and eight times as fast as the day school population and more than three times as fast as the evening school population.

During the two-year period the cost of administration (omitting the two offices showing a decrease) increased about three times as fast as the day school population. During this period the cost of professional control increased about seven times as fast as that of the day school population and about twice as fast as that of the evening school population.

Now it is quite possible that the efficiency of the system has been improved in proportion to the increase in the overhead charges, but in the absence of any scheme of measurement it is impossible to determine that point with any satisfactory degree of precision.

But how far can we reasonably go in increasing such burdens, for the end is by no means in sight?

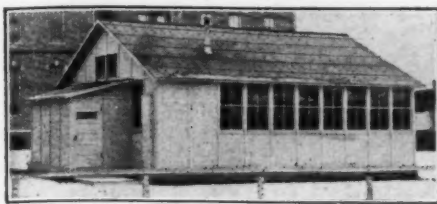
And is not this process going on in other cities, and if so, what is being done to determine whether it is worth while, or to set forth the

facts in order to be able to make comparisons with other cities?

The kind of information I believe essential for this purpose would include the cost of running each office in complete detail and about as set forth on pages 38 to 51 of the accompanying report of the Boston School Committee Report for 1913. The presentation of such information in the public reports of school systems would furnish data of the most valuable kind for the guidance of boards of education in arriving at a sound decision as to how far the extension of such offices can be wisely carried.

The movement for reducing the loss of life and limbs thru industrial accidents and thru carelessness and disregard for ordinary safety, has logically been brought into the schools of the large cities. The large proportion of serious mishaps to children in traveling along the streets and in playing where traffic is heavy, points to the need of instruction in safety. The school is the natural place for such instruction and school boards may well consider the duty and the opportunity of spreading the gospel of "safety first".

A blind student of the Worcester normal school has been denied a certificate to teach in the Massachusetts schools because of the opinion of the State Board of Education, the young woman will never be able to hold a position successfully. The popular sympathy which has been aroused seems to overlook the rights of pupils who would be placed in charge of a blind teacher. The state board has properly held that the education of children comes first and that the teacher's interests are secondary, even though her disability is pathetically appealing.



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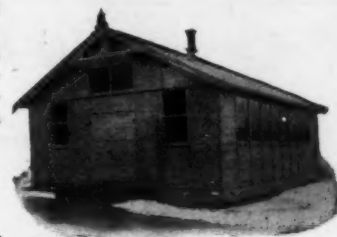
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Like Himself.

John had just returned from college, resplendent in a tight, royal-blue suit, silk hosiery, a fancy waistcoat and a yellow necktie. He entered the room where his father was reading. The old gentleman looked up and surveyed his son. The longer he looked, the more disgusted he became. "Son," he finally blurted out, "you look like a d— fool!"

Later his old maiden aunt, who lived in the neighborhood, came in and greeted the boy affectionately. "My dear John," she said affectionately, "you look exactly like your father did 25 years ago when he came back from school!"

"Yes," said John, with a smile at his father, "so Dad was just telling me."

Or Spectacles On.

"Bobby," asked his maternal ancestor, "what did you learn at school today?"

"I learned," said Bobby, rubbing himself where it still seemed to hurt, "that teacher's got eyes in the back of 'er head. Her face was turned th' other way, an' yet she seen me eatin' an apple."

Way Out.

"Sorry, old man, to hear that your boy hasn't done well."

"Yes, it's a terrible disappointment to me. He's failed in everything—hopeless."

"What do you intend doing with him?"

"Oh, I suppose I'll have to get him a job teaching."



Usually the Case.

"Did you make a hit with your speech at the school board meeting last night?"

"I guess so. I forgot what I intended to say and said what I ought not to have said."

'Twas Ever Thus.

Folks all thought Hank was a fool. Never knew a thing in school. Traded jackknives when he should Have been a studin' up good. Never reached the seventh grade. Folks all said they were afraid Hank would pan out mighty bad. Ignorance, that was his fad. Brother Elmer, he was bright. Studied hard, both day and night. Took the honors of his class. Ne'er a doubt that he would pass. Folks viewed Elmer with great pride. He had all the great men tied. They said he would reach the top, Naught on earth would make him stop. Somehow things seemed to go wrong, Hank grew rich ere very long. Owned a trust and proudly sat In the senate, calm and fat. Owned three autos and a yacht. What he hankered for he got. That's what happened to the fool. Elmer? Oh, he's teaching school.

—Brooklyn Eagle.

Effect Predicted.

The late Jacob Riis was a keen newspaper man, as well as a great sociologist, and thoroly appreciated good newspaper work. Speaking once in Washington to a group of reporters he said:

"As witty a headline as I know of was written by a youth of 18 in a San Francisco newspaper office. There was a bill up to prohibit the sale of alcoholic drinks within four miles of the University of California, and this bill the youth headed:

"An Act to Promote Pedestrianism Among Our Students."

Scientific Inquiry.

"I don't know what to make of my nephew George," remarked the elderly professor. "He has such queer contradictory tastes in music."

"Yes?"

"Yes; I came upon him a little while ago and he was whistling in a dreamy, rapt sort of way the wedding march from 'Lohengrin.' As soon as he saw me he looked confused and changed it at once to 'Too Much Mustard.'"

An Explanation.

"Your nephew is a college graduate, isn't he?"

"Yes," confessed honest Farmer Hornbeak; "but, in justice to the college, I'll own up that he had no sense beforehand."

Teacher—"Willie, why did you stay away from school yesterday?"

Willie—"I wuz sick, mum."

Teacher—"Were you really sick?"

Willie—"Teacher, a feller ain't got no other reason fer stayin' away from school these days."

It had been a hard afternoon for the teacher, who had taken her forty pupils thru the local Museum of Natural History, but her charges reached home quite fresh and sparkling.

"Where have you been, boys?" asked the father of two of them, duly.

"To a dead circus," he was joyously informed.



His Father's Son.

Teacher (in the grammar class)—"How many articles are there?"

Isidor—"Two."

Teacher—"Name them."

Isidor—"Articles that sell and articles that don't."

Meggendorfer.

No Wonder It Was Cold.

The absent-mindedness of the true scholar is well illustrated by this story from the London Weekly Telegraph:

"My dear," said the professor, on entering the dining-room, "don't alarm yourself, but a slight palsy has manifested itself in my left foot. In spite of the fact that the glass is 22 degrees Reaumur above zero, my right foot feels more than normally warm, whereas the left is quite rigid and stiff, and cold as ice."

Upon the directions of the family physician, who was summoned without delay, the professor was put to bed, when it was discovered that he had two socks on his right foot, and none on his left foot!

What Could He Do.

The teacher was reading the history of England to some of the little pupils. When she came to the statement that Henry I. never laughed after the death of his son, she noticed one of the little girls had raised her hand and seemed very desirous of attracting her attention.

"Weil, Amy," said teacher, "what is it?"

"Please, ma'am," said little Amy, "what did Henry I. do when he was tickled?"

Schneller Erfolg.

"Also du hast jetzt franzoesischen Unterricht bei einem Privatlehrer?"—"Ja, bereits seit einem Jahre."—"Bist du denn schon mit der Sprache vertraut?"—"Mit der Sprache nicht, aber mit der Lehrer."

Educational Trade Directory

The names given below are those of the leading and most reliable Manufacturers, Publishers and Dealers in the United States. None other can receive a place in this Directory. Everything required in or about a schoolhouse may be secured promptly and at the lowest market price by ordering from these Firms.

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REFERENCE INDEX

	Page		Page
Albion Bangor Slate Co.	43	Lyons & Carnahan	74
American Crayon Co.	53	McConnell School Supply Co.	83
Amer. Drafting Furniture Co.	1	McIntosh Stereopticon Co.	40
American Portable House Co.	83	Macmillan Co., The	8
American Type Founders Co.	44	Medart Mfg. Co., Fred	38
Amer. Sanitary Products Co.	7	Merriam Co., G. & C.	73
American Seating Co.	50 & 51	Merritt & Co.	83
American Window & Door Co.	36	Mershon & Morley Co.	82
Archover Fountain Co.	79	Miller Hot Air Vehicle Co.	79
Associated Manufacturers Co.	83	Murdoch Mfg. & Supply Co.	68
Atlas School Supply Co.	82	Murray & Co., L. A.	78
Automatic Pencil Sharpener Co.	1	National Crayon Co.	76
Barnes Pub. Co., A. J.	74	National Terra Cotta Society	70
Bausch & Lomb Opt. Co.	46	Natural Science Co.	70
Bemis, A. L.	71	Nelson Mfg. Co., N. O.	67
Binney & Smith Co.	7	New Jersey School & Church Furniture Co.	60
Bradley Co., Milton	54	N. Y. Silicate Book Slate Co.	74
Cabot, Samuel	4th Cover	North Bangor Slate Co.	43
Central City Chemical Co.	44	Nystrom & Co., A. J.	38
Charles Co., Thomas	79	Oliver Machinery Co.	57
Chicago Apparatus Co.	49	Olsen & Sons, C. J.	78
Christiansen, C.	71	Orr & Lockett Hdw. Co. 2d Cover	76
Cleveland Inkwell Co.	64	Paltridge Metal Equip. Co.	76
Clow & Sons, James B.	69	Parsons Bros. Slate Co.	43
Colonial Crayon Co.	52	Patek Brothers	37
Columbia School Supply Co.	6	Peabody School Furn. Co.	81
Connecticut Tel. & Elec. Co.	76	Peckham, Little & Co.	82
Cook & Co., F. H.	76	Penna. Blackboard Co.	43
Cott-a-Lap Co., The	4th Cover	Penna. Struct. Slate Co.	1
Crescent Machine Co.	80	Permanent Educational Ex. Co.	83
Crown Slate Co.	43	Peterson & Co., Leonard	32
Delphi Wagon Works	78	Peter & Volz Co.	60
DeFree Chemical Co.	7	Phoenix Slate Co.	43
Detroit Loose Leaf Spec. Co.	82	Phonographic Institute, The	74
Devoe & Reynolds	54	Pitman & Sons, Isaac	74
Diamond Slate Co.	43	Power Co., Nicholas	41
Dow Wire & Iron Works	76	Prang Co., The	80
Draper Shade Co., Luther O.	80	Price, W. R.	36
Dudfield Mfg. Co.	76	Putnam's Sons, G. P.	74
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Ebinger San. Mfg. Co., D. A.	66	Richards-Wilcox Mfg. Co.	71
Economy Drawing Table Co.	77	Rowles, E. W. A.	77
Educational Pub. Co.	73	Rundell-Spence Mfg. Co.	68
Educational Supply Co.	78	Sectionfold Partition Co.	62
Excelstor Slate Co.	43	Sheldon & Co., E. H.	71
Faber, Eberhard	84	Silver, Burdett & Co.	8
Federal Sign System (Elec.)	70	Sower Co., Christopher	75
Federal Steel Fixture Co.	78	Spencer-Turbine Cleaner Co.	59
Foote Foundry Co., J. B.	40	Squires Inkwell Co.	64
Frampton Window Shade Co.	80	Stephens-Jackson Co.	43
Fuson Adjustable Shade Co.	80	Standard Elec. Time Co. 4th Cov.	43
Globe-Wernicke Co.	33	Stanley & Patterson, Inc.	55
Ginn & Co.	8	Steele Mfg. Co., Oliver C.	80
Grand Rapids Hand. Sc. Co. 4 & 5	48	Steel Furniture Co.	81
Hahl Automatic Clock Co.	48	Superior Seating Co.	81
Hahn, Granville	43	Tannewitz Works, The	7
Ham. Paint & Slug Shot Wks.	77	Tinsman & Co., M. L.	43
Haney School Furniture Co.	81	Tothill, W. S.	81
Heath & Co., D. C.	8	United Electric Co., The	65
Hess Warming & Vent. Co.	62	U. S. Inkwell Co.	64
Holden Patent Book Cover Co.	39	University Pub. Co.	75
Holtzer-Cabot Elec. Co., The	46	Victor Animatograph Co.	58
Hort Co., Arthur S.	56	Victor Talking Machine Co.	51
Inevitable Mfg. Co.	70	Virginia School Supply Co.	36
Johnson, E. J.	43	Vonnegut Hardware Co.	3
Johnson, R. R.	80	Wadsworth, Howland & Co.	52
Kans. City Seale Co.	82	Weis Cornice Co., Henry	66
Keenan Struct. Slate Co.	1	West Disinfecting Co.	34
Kewaunee Mfg. Co.	47	Western Electric Co.	35
Keystone Book Co.	78	Whitcomb & Boyce	7
Kurtz Bros.	78	Wimmer & Co., C. I.	80
Langs Engineering & Mfg. Co.	48	Wolff Mfg. Co., L.	63
Langslow Fowler Co.	61	Zellner, Thomas	44
Lehigh Slate Mfg. Co.	43		
Linnicott Co., J. B.	75		

If During the Present Summer —



Fig. 565, List No. 66

Self-winding
Two Program
Master Clock,
12-inch Dial,
72-beat Pendulum,
Quartered Oak Case,
Cabinet Finish.

The Program Clock problem stares you in the face, please remember that we can answer every demand in this direction. To illustrate,

We show here one style of Program Clock which should prove ideal for thousands of schools. It is a **Self-Winding, Two Program Master Clock** and will automatically perform the following functions:

- Operate programs of signals on two circuits of bells;
- Operate two programs on one circuit of bells;
- Operate day and night programs on one circuit of bells;
- Operate one program on certain days and alternative program on remaining days of the week;
- Silence all signals after Friday session until Monday;
- May be set at minute intervals, allowing arrangement of any program;
- Operate any number of Secondary Clocks.

Remember, if this clock does not answer your peculiar needs, we can supply you with anything you want.

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REPAIR THE OLD WALLS

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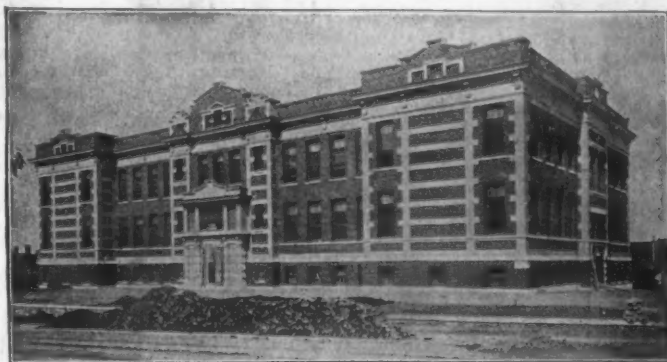
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